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ABSTRACT

Between 1959 and 1964, the number of farms with annual product sales of over $100,000 rose from 19,979 to 31,401, increasing this group's share of the market from 16 to 24 percent. During the same period, the 408 farms reaching the $1 million mark with a 4 percent share of the market increased to 919 farms with 7 percent of the market. This report analyzes the characteristics of these increasingly important large-scale farms. The data indicate that the operators of the larger farms differ from other operators in educational background, but not in age. The typical large-scale farm is a meat-producing farm located in the West. The report notes that technical efficiency is greater on the large farm, but the ratio of purchased inputs per unit of output is much lower for the small farm. (BH)

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OUR 31,000 LARGEST FARMS

VT012056

AGRICULTURAL ECONOMIC REPORT No. 175
ECONOMIC RESEARCH SERVICE
U.S. DEPARTMENT OF AGRICULTURE

UNITED STATES DEPARTMENT OF AGRICULTURE
Economic Research Service
Farm Production Economics Division

E R R A T A

OUR 31,000 LARGEST FARMS, U.S. Dept. Agr., Agr. Econ. Rpt. No. 175, March 1970.

Page 14, table 8, unit column, opposite vegetables--
change line 23 to "Acres harvested" and
change line 24 to "Sales in dollars."

Page 16, table 9, unit column, opposite vegetables--
change line 22 to "Sales in dollars" and
change line 23 to "Acres harvested."

Page 17, table 10, column 1, row 2, opposite tobacco--
change 31.4 to 62.9.

Page 23, paragraph 1, lines 7 and 8, change percentages as follows:

81 percent to 79 percent
64 percent to 61 percent
69 percent to 64 percent

Page 35, paragraph 2, line 2, should read--

"...operators with less education..."

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PREFACE

This report is based mainly on information shown in a special tabulation of 1964 Census of Agriculture data for farms with annual sales of $100,000 or more. The tabulation was obtained from the Bureau of the Census, Department of Commerce.

This tabulation permits us, for the first time, to present comprehensive national and regional information on the largest farms, by sales group, including farms with annual sales of $1 million or more. These are the latest and only data available nationwide on the largest farms. The data were not available until 1969, and no new data are expected for several years to come.

Administrators, legislators, and the general public have expressed widespread interest and concern with respect to large-scale farms. This report will provide information that should help put issues concerning these farms into proper perspective, especially as concerns their importance in the future organizational structure of agriculture.

Specific acknowledgement of their valuable cooperation is made to J. Thomas Breen, Chief, and to Arnold L. Bollenbacher and John A. Blackledge, Statisticians, Agriculture Division, the Bureau of the Census. Acknowledgement is also due to Ella S. Wells, statistical assistant, USDA, whose competent statistical work served as the basis for this study.

Note: In this report, size of farm is delineated as follows:

	Gross sales
The largest	$100,000 or more
Large	$20,000 to $99,999
Medium	$5,000 to $19,999
Small	Less than $5,000

Within the "largest" farm size, farms with sales of $1 million or more are referred to as "Top-Scale."

Other sources frequently refer to the "largest" farms (sales of $100,000 or more) as "large-scale" farming.

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SUMMARY

In 1964, 31,401 farms with product sales of $100,000 or more accounted for 24 percent of all farm product sales. Of these largest U.S. farms, 919 had sales of $1 million or more, or 7 percent of all sales. In 1959, only 19,979 farms had sales of $100,000 or more, and 408 farms had sales of $1 million or more--accounting for 16 percent and 4 percent of all farm sales.

The importance of these largest farms is especially pronounced in the West. In 1964, while farms with product sales of $100,000 or more accounted for 12 percent of all farm product sales in the North and 24 percent in the South, they accounted for 53 percent in the West (see map on page iv). The concentration of a relatively small number of large farms in the West is evidenced by the fact that 524 farms with product sales of $1 million or more--0.2 percent of all farms in the West--accounted for more than a fifth of all farm product sales in that part of the country. Farms of this size accounted for 5 percent of all farm product sales in the South and only 2 percent in the North.

Poultry and other meat-producing farms accounted for 42 percent of all farms with $100,000 or more of sales and for 47 percent of their marketings. Within this sales group, meat-producing farms accounted for 54 percent of all farms with sales of $1 million or more, and 59 percent of their marketings.

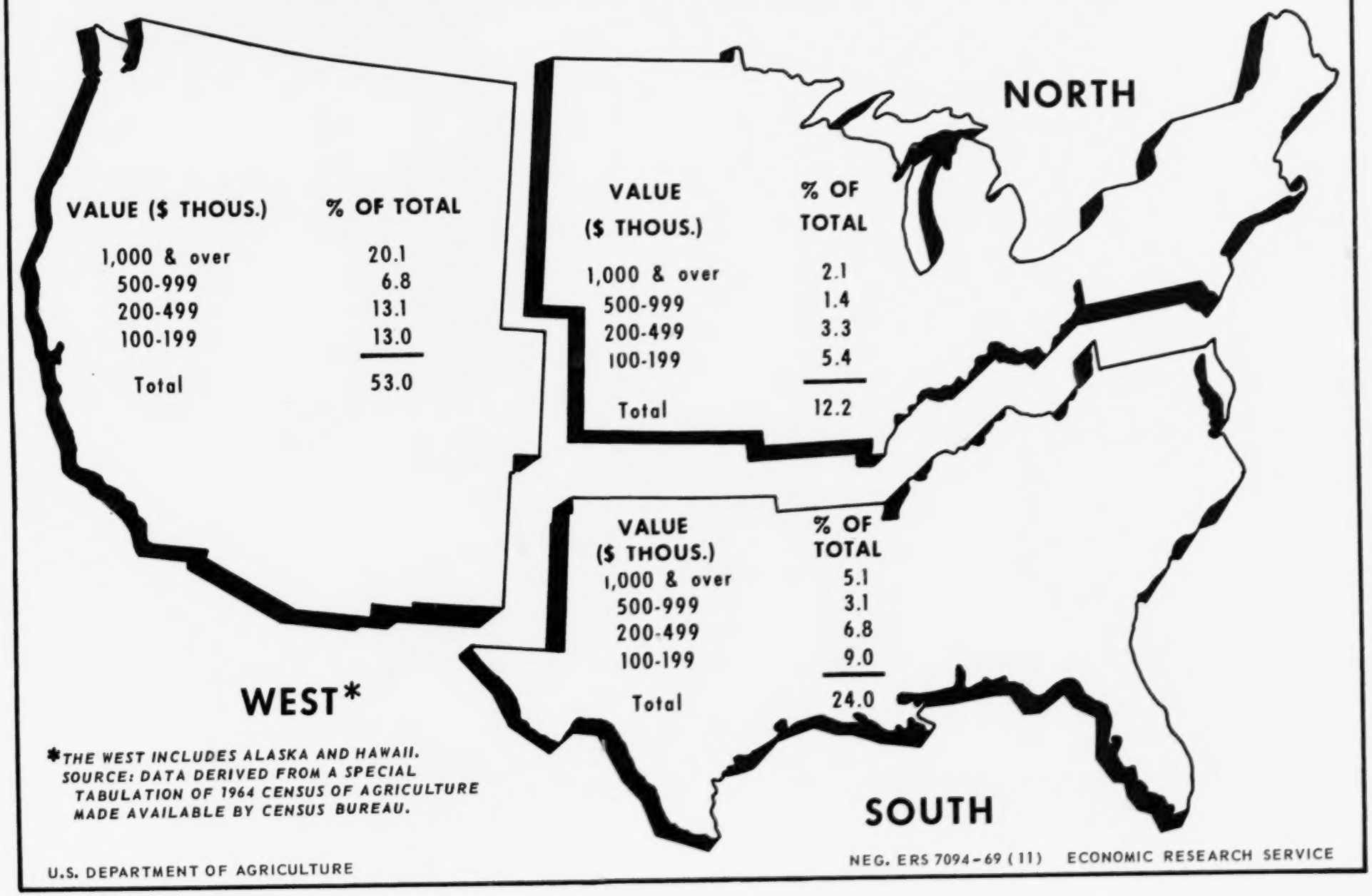
Farms with sales of $100,000 or more had 121 million acres of land--11 percent of total farmland. This acreage was mostly in grazing land--66 percent--followed by 24 percent in cropland and 7 percent in woodland.

Operators on the largest farms are about the same age as those on other commercial farms, but they have a higher educational attainment.

Farms with sales of $100,000 or more are predominantly operated with hired labor. However, in some parts of the country, such as in the Corn Belt and the Lake States regions, many of these farms are family-operated. In California in 1964, only 4 percent of all sales by these largest farms came from family-operated units, but in Iowa this proportion was 45 percent.

These largest farms have a greater technical efficiency than smaller farms, as measured by ratios such as acres harvested per machine, yield per acre, and output per animal. However, the ratio, purchased inputs per unit of output, for the largest farms is much greater than for smaller farms.

MARKETINGS BY THE LARGEST FARMS AS A PERCENTAGE OF TOTAL FARM SALES, BY GEOGRAPHIC DIVISIONS, 1964



*THE WEST INCLUDES ALASKA AND HAWAII.
SOURCE: DATA DERIVED FROM A SPECIAL TABULATION OF 1964 CENSUS OF AGRICULTURE MADE AVAILABLE BY CENSUS BUREAU.

U.S. DEPARTMENT OF AGRICULTURE

NEG. ERS 7094-69 (11) ECONOMIC RESEARCH SERVICE

OUR 31,000 LARGEST FARMS

by

Radoje Nikolitch, Agricultural Economist
Farm Production Economics Division

INTRODUCTION

U.S. farms with annual sales of $100,000 or more of farm products had average marketings of $272,000 in 1964. In that year, more than 31,000 farms were in that size class. These farms are small businesses compared with firms in most other commodity-producing industries. However, they are the largest in the farm economy.

The aim of this report is to determine the relative position and recent trends of the largest farms in American agriculture. More specifically, the report will describe their types of enterprise, their production resources, the type of land tenure under which the farms are operated, the farm operators, the portion of farms that are family-operated, and how efficiently the largest farms use their production resources. This analysis, it is hoped, will contribute to a better understanding of the largest farms in U.S. agriculture and may also help to answer questions often asked about large-scale farming. For example, what is the real problem, if any, presented by big farms? Do they tend to dominate the farming industry? Is large-scale farming necessary on certain types of farms for economic efficiency?

RELATIVE SALES POSITION OF THE LARGEST FARMS

In 1959, 19,979 farms with sales of $100,000 or more accounted for 0.5 percent of all farms and more than 16 percent of total farm marketings. By 1964 the number of such farms had increased considerably. In that year, 31,401 farms--about 1 percent of all farms--had sales of $100,000 or more and accounted for almost a fourth of total farm marketings. The number of farms and value of sales expanded for all sales classes. The number of farms with sales of $1 million or more increased from 408 in 1959 to 919 in 1964, accounting for 4.2 percent of all farm products sold in 1959, compared with 6.8 percent in 1964 (table 1). The importance of these farms varies greatly by business size of farm (explained below) and by region.

Business Size

On the basis of gross sales, all Census-reported farms were classified into four size groups for this report. The first group includes the largest farms, with annual sales of $100,000 or more. The second group consists of large farms with annual sales of $20,000 to $99,999.

Table 1.--Number and sales of farms with sales of $100,000 or more, and their percentage of total farm sales, by specified size, 1959 and 1964

Size of farm in value of sales	1959			1964			Sales as a percentage of total farm sales	
	Farms	Value of sales		Farms	Value of sales		1959	1964
		Total	Per farm		Total	Per farm		
	Number	Billion dollars 1/	1,000 dollars 2/	Number	Billion dollars	1,000 dollars	Percent	Percent
$1,000,000 or more	408	1.3	3,186	919	2.4	2,576	4.2	6.8
$500,000-$999,999	800	.5	651	1,574	1.1	678	1.7	3.1
$200,000-$499,999	4,570	1.3	280	7,760	2.2	290	4.2	6.4
$100,000-$199,999	14,201	1.9	131	21,148	2.8	135	6.2	8.0
Total	19,979	5.0	249	31,401	8.5	272	16.3	24.3

1/ Estimated by multiplying average sales by number of farms.
2/ Estimated by comparing sales distributions in 1959 and 1964.

Source: Data derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

The third group is composed of medium-sized farms, with annual sales of $5,000 to $19,999. The fourth group, small farms, includes all farms with sales of less than $5,000. These farms are small commercial units that provide inadequate employment for farm operators and income for their families or they are part-time and part-retirement units.1/

Changes in size in these four groups from 1959 to 1964 indicate a continuing trend toward fewer and larger commercial farms. Medium- and large-sized farms, in 1964, still accounted for the largest part of farm sales (68 percent), current farm operating expenses (62 percent), and farm real estate value (65 percent) (table 2).

Four additional observations are relevant for understanding the measurement of farm size by gross sales and the economic importance of farms in different size sectors.

Measurements Between Time Periods

Some economists have indicated problems in using gross sales as a measure of size. For example, Mighell points out that "the usual comparisons of numbers of farms by economic classes between two periods in which there has been a general growth in size, seem to imply a faster rate of growth on the part of large farms than is actually the case. This is because a fixed set of sales classes cuts different sectors of the frequency distribution appropriate to each period." Using Lorenz curve analysis, he avoided the bias and found that gross sales per farm increased only slightly more in the higher percentiles.2/ The author of the present study is not a critic of gross sales as a measure of farm size.3/

Interfarm Trade of Farm Products

Increasing specialization among farmers, as is well known, is associated with a considerable increase in purchased inputs needed for farm production. What is not so often thought of is that this increasing specialization is associated also with an increasing degree of interfarm sales of farm products. That is, more and more farm products in their different processing stages are traded successively to different farms, mostly by dealers but also among farmers, before these products go to nonfarm markets. Thus, the amount of interfarm trade inflates considerably the reported value of gross sales by any group of farms, especially livestock farms. The extent of this inflation equals the cost of agricultural products paid to the farmer originally producing these products

---

1/ Part-time and part-retirement units are small noncommercial farms with less than $2,500 of farm products sold annually, and they are more residential than productive farms. Nonfarm occupations are the main source of income on part-time units, and various retirement benefits, as well as nonfarm occupations, are the main source of income on part-retirement units.

2/ Ronald L. Mighell, paper given at annual meeting, American Association of Agricultural Economists, University of Kentucky, Aug. 19-23, 1969.

3/ See this report, section on business size of farms, and Radoje Nikolitch and Dean E. McKee, "The Contribution of the Economic Classification of Farms to the Understanding of American Agriculture," Jour. of Farm Econ., Vol. 47, No. 5, Dec. 1965, pp. 1545-1554.

Table 2.--Number of farms, sales, selected farm production expenditures, and real estate value of farm, and as a percentage of all farms, by size of farm, 1959 and 1964

Size of farm 1/	Number of farms 2/		Sales		Selected expenditures 3/		Real estate value of farm	
	1959	1964	1959	1964	1959	1964	1959	1964
	Thousands	Thousands	Million dollars	Million dollars	Million dollars	Million dollars	Million dollars	Million dollars
The largest	20	31	4,981	8,539	2,990	5,103	11,136	19,470
Large	292	371	10,319	13,588	5,321	6,544	31,074	50,503
Medium	1,137	972	11,428	10,267	4,963	4,271	49,552	52,733
Small 4/	2,256	1,782	3,789	2,754	1,953	1,581	31,860	35,395
Total	3,705	3,156	30,517	35,148	15,227	17,499	123,622	158,101
	Percentage of total for all farms							
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
The largest	0.5	1.0	16.3	24.3	19.6	29.2	9.0	12.3
Large	7.9	11.7	33.8	38.7	35.0	37.4	25.1	31.9
Medium	30.7	30.8	37.5	29.2	32.6	24.4	40.1	33.4
Small 4/	60.9	56.5	12.4	7.8	12.8	9.0	25.8	22.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

1/ Farm sizes are measured as follows: The largest--sales of $100,000 or more; large--$20,000 through $99,999; medium--$5,000 through $19,999; and small--less than $5,000.
2/ Indian reservations, institutional and other special farms not included.
3/ Feed, livestock, seed, fertilizer, petroleum products, machine hire, and hired labor.
4/ Operator households on these farms have, on the average, more nonfarm than farm income.

Source: Derived from the 1964 Census of Agriculture, Vol. II, Ch. 6.

and is reflected in gross sales of the farmer buying the products. Information is not available to determine exactly when and in what form farm products bought from other farms were resold to nonfarm markets. However, that part of the cost of such purchases paid to original producers on the selling farms provides a good indication of the proportion of interfarm sales included by farmers in reports of their total gross sales.

Interfarm trade increases with the size of farm. In 1964, such trade amounted to 27 percent of gross sales for farms with $100,000 or more of sales, and 36 percent for the 919 units with sales of $1 million or more (app. table 1).

Business Size of Farms

Interfarm trade can measure fairly accurately the overestimation of net agricultural production on farms as a group. The Nation's largest farms have produced considerably fewer farm products in a value-added sense than would usually be estimated from their gross sales. But this fact does not lessen their economic importance or business size in other respects. The importance and size of a business is determined by the value of its purchased and nonpurchased inputs, as well as by the value of its output. Buying and selling, as well as managing and working, are all important economic activities and together shape the size and the economic importance of a business. For example, in a value-added sense, cattle feedlots have relatively little net agricultural production. However, as "buyers" of steers and feed and as "sellers" of large numbers of fed cattle, they influence and greatly control the supply, marketings, and quality of these farm products in a given region, if not nationally. Thus, the value of net agricultural production of large feedlots (capacity of 1,000 head or more) was estimated to have been less than $99 million in 1964, or only 7.3 percent of the value of all cattle slaughtered in that year. But it was also estimated that such large feedlots accounted for a fifth of the total marketing of all cattle for slaughter (app. table 2).

Small Units

Units with less than $5,000 of sales are probably not the farms of the future. But they continue to be an important part of the farm economy. In 1964, 1.8 million small farms had sales under $5,000. Together, these farms sold $2.8 billion of farm products--8 percent of total nationwide sales--and accounted for 23 percent of total farm real estate value, and 9 percent of the main purchased farm production inputs.4/ More than 52 percent (about 6 million people) of the total farm population lived on these small units, where farming is mostly a part-time occupation and a secondary source of family livelihood.5/ However, in 1964, total value of marketings of small farms was higher than that for the few farms with sales of $1 million or more. The economic and social significance of these aspects of U.S. farming organization can hardly be overestimated.

4/ In 1964, small farms accounted for (by value) 8 percent of all corn produced, 9 percent of wheat, 25 percent of tobacco, 5 percent of milk sold, and 9 percent of all cattle and calves sold.

5/ 1964 Census of Agriculture, Vol. 2, Ch. 6, table 15, p. 641.

Regional Differences

The economic importance of large-scale farming differs greatly by geographic regions. Farms with sales of $100,000 or more accounted for 12 percent of total 1964 farm marketings in the North, 24 percent in the South, and 53 percent in the West. These differences are even more pronounced for farms with sales of $1 million or more. In 1964, such farms accounted for only 2 percent of total farm marketings in the North and 5 percent in the South. However, in the West, the 524 topscale farms accounted for 20 percent of all farm sales there (see map on inside cover and app. table 3).

A more complete regional analysis is possible for the Nation's largest farms when they are considered as one group. They are concentrated in the Pacific, Mountain, and Southern Plains regions and in each region have a different economic importance. In 1964, farms with sales of $100,000 or more accounted for 59 percent of all farm sales in the Pacific region and 35 to 40 percent in the Mountain and Southeast regions, but less than 10 percent in the Lake States, Corn Belt, and Appalachian regions (table 3).

The economic importance of these farms differs even more by individual States. California alone had 22 percent of the total number and 28 percent of the total sales.

Average 1964 sales were highest in Arizona, Florida, and California--$436,000, $406,000, and $342,000 respectively. They were only about $200,000 in all States in the Corn Belt and Lake States regions (app. table 4).

Measuring the economic importance of a farm business by the value of its sales, we can separate States into three broad categories: States where marketings by farms with sales of $100,000 or more accounted for more than 50 percent of the value of all farm products sold, States where this proportion ranged from more than 20 percent to 49.9 percent, and States where such marketings accounted for less than 20 percent of all farm products sold.

Arizona, California, and Florida are the States where the economic importance of large-scale farming is the greatest. In Arizona, farms with 1964 sales of $100,000 or more accounted for 13 percent of all the State's farms and 78 percent of all farm products sold. In both California and Florida, these largest units accounted for 7 percent of all farms in these States and for 69 percent of all sales. In both the Lake States and the Corn Belt regions, by contrast, the largest farms accounted for only about 5 percent of all farms and for less than 10 percent of all farm sales (fig. 1).

THE LARGEST FARMS BY TYPE OF ENTERPRISE

The economic importance of the largest farms varies also by type of farm, and within the types by region, source of sales, and specialization of production.

Cotton, poultry, and other meat-producing livestock farms (including ranches) account for most large-scale farms. In 1964, these types of farms constituted more than half of all the largest farms (53 percent)

Table 3.--Number and sales of farms with sales of $100,000 or more and their regional distribution, 1959 and 1964

Region	Number of farms		Sales		Percentage of total farm sales		Average sales per farm		1964 regional distribution	
	1959	1964	1959	1964	1959	1964	1959	1964	Number	Sales
	Number	Number	Million dollars	Million dollars	Percent	Percent	1,000 dollars	1,000 dollars	Percent	Percent
New England	384	862	75.0	192.9	12.3	26.9	195	224	2.7	2.3
Middle Atlantic	923	1,833	199.0	380.9	9.7	17.0	216	208	5.9	4.5
Lake States	541	1,228	99.2	246.0	3.5	7.6	183	200	3.9	2.9
Corn Belt	1,986	3,913	375.1	740.1	5.4	9.4	189	189	12.5	8.8
Northern Plains	1,486	2,271	381.6	656.7	11.6	17.7	257	289	7.3	7.8
Appalachian	591	1,183	115.4	249.5	5.0	9.1	195	211	3.7	3.0
Southeast	1,723	3,086	485.5	953.1	23.8	35.7	282	309	9.9	11.4
Delta States	1,516	2,854	276.2	549.7	18.0	28.0	182	193	9.1	6.5
Southern Plains	2,278	2,775	464.7	703.5	17.2	24.9	204	254	8.9	8.4
Mountain	2,306	2,992	667.9	1,001.0	28.4	39.5	290	335	9.6	12.0
Pacific	6,127	8,276	1,721.4	2,709.5	44.7	59.3	281	327	26.5	32.4
United States 1/	19,861	31,273	4,861.0	8,382.9	16.0	24.2	245	268	100.0	100.0

1/ Hawaii not included.

Source: 1964 Census of Agriculture, Vol. I, State table 23.

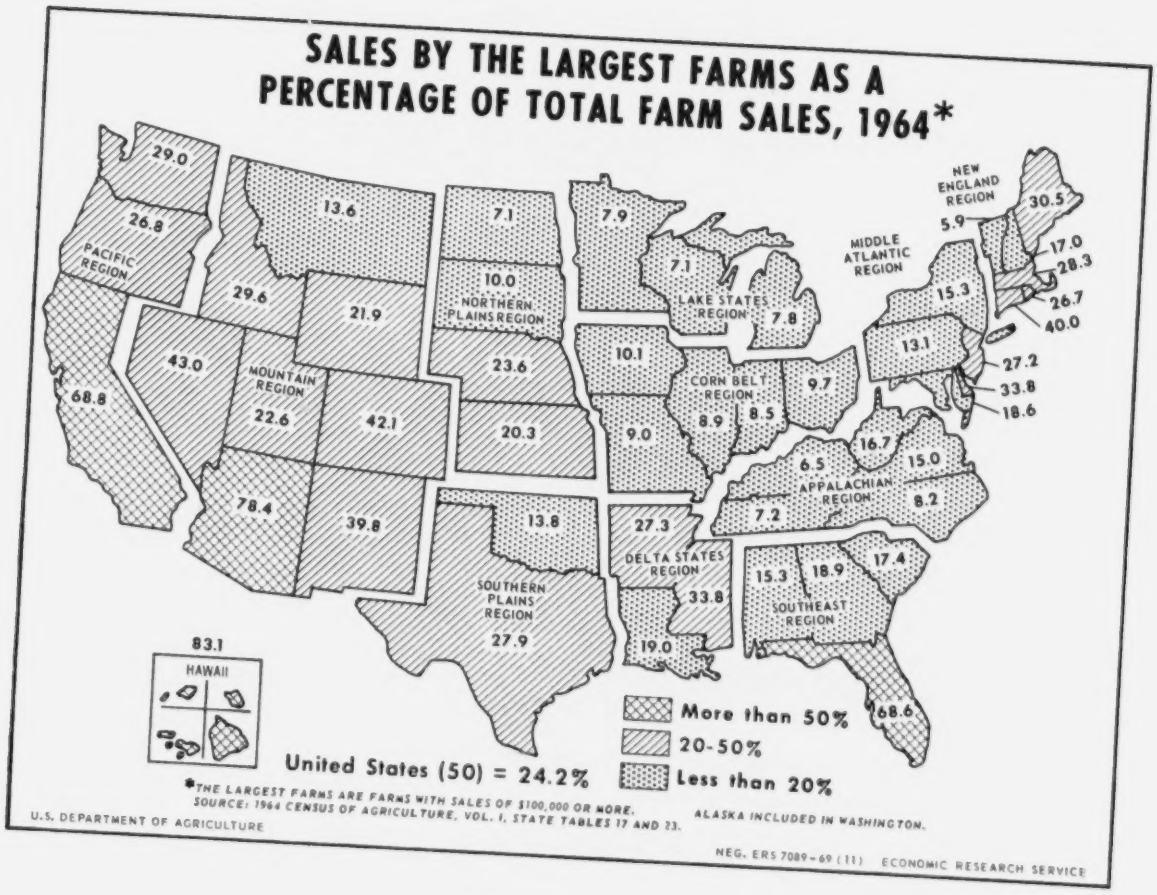


Figure 1

and more than half of their sales (56 percent). Vegetable, fruit, and other meat-producing livestock farms (including ranches), on the other hand, accounted for about two-thirds of all farms with sales of $1 million or more (64 percent) and for two-thirds of their sales (68 percent) (app. table 5).

Although few in number, farms with sales of $1 million or more are economically important in most types of farms. In 1964, the 94 topscale vegetable farms accounted for 23 percent of the sales of the Nation's 23,207 commercial vegetable farms. The 68 topscale field crop farms (other than cash-grain, tobacco, and cotton farms) with $1 million or more sales, accounted for 16 percent of sales from the Nation's 35,130 commercial field crop farms. The 322 topscale livestock farms (other than poultry farms, dairy farms, and ranches) accounted for 11 percent of all sales by the 514,529 commercial livestock farms. The 81 topscale ranches accounted for 20 percent of all sales by the 66,282 commercial ranches. The 48 topscale miscellaneous farms accounted for 8 percent of all sales by the 78,528 commercial miscellaneous farms. The sales proportions by units with sales of $1 million or more were considerably smaller for the topscale cash-grain and dairy farms (table 4).

Two additional observations concerning the number and sales of farms with sales of $100,000 or more are relevant here. Changes over time in the number of these farms varied greatly by type of farm. From 1959 to 1964, the largest farms of the field crop and poultry farm types increased in number at a fast rate. The rate was slower for the largest cotton, fruit, and dairy farms (app. table 6).

Table 4.--Farms with sales of $100,000 or more, by specified size, and their sales as a percentage of all commercial farms, by type of farm, 1964

Type of farm	All commercial farms	Size in value of sales				
		Total $100,000 or more	$1,000,000 or more	$500,000-$999,999	$200,000-$499,999	$100,000-$199,999
	No.	No.	No.	No.	No.	No.
All commercial farms	2,165,712	31,401	919	1,574	7,760	21,148
Cash-grain	404,253	2,141	5	29	345	1,762
Tobacco	171,384	102	11	7	27	57
Cotton	164,076	3,465	36	112	847	2,470
Other field crops	35,130	2,237	68	83	560	1,526
Vegetable	23,207	1,590	94	158	521	817
Fruit and nut	57,256	2,511	93	168	711	1,539
Poultry	82,120	4,744	89	224	1,212	3,219
Dairy	366,967	2,576	19	93	609	1,855
Livestock farms (other than poultry and dairy farms and livestock ranches)	514,529	6,692	322	368	1,436	4,566
Livestock ranches	66,282	1,815	81	117	485	1,132
General	201,980	1,884	53	90	504	1,237
Miscellaneous	78,528	1,644	48	125	503	968
	Sales	Sales as a percentage of all commercial farm sales				
	Mil. dol.	Pct.	Pct.	Pct.	Pct.	Pct.
All commercial farms	34,369	24.8	6.9	3.1	6.5	8.3
Cash-grain	5,506	6.4	0.1	0.3	1.8	4.2
Tobacco	1,119	4.0	2.2	0.4	0.7	0.7
Cotton	2,434	31.3	4.5	3.1	10.0	13.7
Other field crops	1,289	49.1	16.1	4.4	12.4	16.2
Vegetable	857	67.0	22.8	12.8	18.3	13.1
Fruit and nut	1,616	46.6	13.3	7.0	13.2	13.1
Poultry	2,919	38.0	5.7	5.3	12.1	14.9
Dairy	5,355	9.9	0.7	1.3	3.2	4.7
Livestock farms (other than poultry and dairy farms and livestock ranches)	8,295	26.8	11.4	3.0	5.0	7.4
Livestock ranches	1,410	46.5	19.7	5.7	10.3	10.8
General	2,621	18.3	4.0	2.3	5.6	6.4
Miscellaneous	948	44.5	7.5	8.4	15.0	13.6

Source: Census of Agriculture, Vol. II, Ch. 10, table 8 and derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

Average sales of the largest farms also differ by type of farm. Those in the tobacco, vegetable, fruit, and meat-producing livestock groups had the highest average annual sales. The largest cash-grain and dairy farms had lower average sales. The largest cotton and other field crop farms had higher average sales than did the largest tobacco, vegetable, and fruit farms. For the 919 topscale farms (sales of $1 million or more), livestock ranches and other field crop farms had the largest average annual sales (app. table 7).

Geographic Regions

In 1964, farms with sales of $100,000 or more were slightly more numerous in the West than in the South, and slightly more numerous in the South than in the North (table 5). The largest vegetable, fruit, dairy, and general farms, as well as the largest livestock ranches, were concentrated in the West; and the largest cash-grain, tobacco, cotton, and poultry farms, in the South. Livestock and field crop farms, as well as miscellaneous farms, occurred mostly in the North.

The 919 farms with sales of $1 million or more have a somewhat different geographic distribution by type of farm. Except for tobacco, miscellaneous, fruit, and poultry farms, topscale farms were centered in the West in 1964. Topscale tobacco and miscellaneous farms were mainly in the North. Fruit and poultry farms of this size were most numerous in the South. In 1964, the North had only 18 percent of all topscale farms and accounted for only 15 percent of total marketings from this size class (table 5 and app. table 8).

The dominance of the largest farms in the West is evident for all types of farms in that part of the country, but is especially pronounced for vegetable, cotton, other field crop, poultry, and other livestock farms (table 6 and app. tables 9, 10, and 11).

The size of these largest farms by type of farm also differs by regions. Generally, these farms are larger in the West and South than in the North (app. table 12).

The Source of Sales

An increasing amount of farm products are marketed from the largest farms. But these increases vary greatly depending on the kind of products marketed. For example, the largest farms' share of vegetables sold increased from 49 percent in 1959 to 61 percent in 1964; for fruits and nuts, their share increased from 31 to 46 percent; for poultry and poultry products, from 17 to 35 percent; and dairy products, only from 7 to 11 percent (table 7).

Marketings by the largest farms increased as a proportion of all sales especially rapidly for eggs and potatoes. But the increase is also considerable for many other commodities (app. table 13).

In 1964, more than half of all cattle fattened on grain and concentrates came from farms with sales of $100,000 or more. The largest farms accounted also for 61 percent of vegetables sold, 58 percent of turkeys raised, 46 percent of acreage in Irish potatoes, 37 percent of acreage in rice, 32 percent of land in orchards, and 30 percent of acreage in sugarbeets. Their share in other farm products was much smaller. The largest farms accounted for only 4 percent of hogs and pigs sold, 6

Table 5.--Percentage distribution of number and sales of farms, by specified value of sales, by type of farm and by geographic regions, 1964

Type of farm	Farms with sales of $100,000 or more				Farms with sales of $1,000,000 or more			
	Total farms	Regional distribution of farms			Total farms	Regional distribution of farms		
		North	South	West		North	South	West
	No.	Pct.	Pct.	Pct.	No.	Pct.	Pct.	Pct.
All farms	31,401	30.8	32.9	36.3	919	18.1	24.9	57.0
Cash-grain	2,141	19.1	50.7	30.2	5	---	---	100.0
Tobacco	102	39.2	60.8	---	11	100.0	---	---
Cotton	3,465	1.3	70.3	28.4	36	---	11.1	88.9
Other field crops	2,237	42.0	17.7	40.3	68	7.4	13.2	79.4
Vegetable	1,590	15.0	24.5	60.5	94	2.1	33.0	64.9
Fruit and nut	2,511	12.2	30.0	57.8	93	1.1	58.1	40.8
Poultry	4,744	32.6	47.0	20.4	89	21.3	42.7	36.0
Dairy	2,576	11.9	26.1	62.0	19	10.5	36.9	52.6
Livestock farms (other than poultry and dairy farms and livestock ranches)	6,692	70.9	11.0	18.1	322	31.1	15.8	53.1
Livestock ranches	1,815	10.6	31.4	58.0	81	6.2	24.7	69.1
General	1,884	9.2	28.4	62.4	53	---	3.8	96.2
Miscellaneous	1,644	45.3	27.4	27.3	48	43.7	27.1	29.2
	Sales	Regional distribution of sales			Sales	Regional distribution of sales		
	Mil. dol.	Pct.	Pct.	Pct.	Mil. dol.	Pct.	Pct.	Pct.
All farms	8,539	24.9	29.8	45.3	2,367	15.1	23.0	61.9
Cash-grain	352	16.0	48.4	35.6	7	---	---	100.0
Tobacco	44	77.2	22.8	---	24	100.0	---	---
Cotton	762	0.9	57.1	42.0	111	---	4.4	95.6
Other field crops	633	28.6	17.1	54.3	208	3.8	15.2	81.0
Vegetable	575	9.2	28.4	62.4	195	1/	1/	64.1
Fruit and nut	754	7.5	42.0	50.5	215	1/	1/	34.2
Poultry	1,109	29.0	46.9	24.1	166	16.3	45.9	37.8
Dairy	530	9.7	27.8	62.5	38	1/	1/	1/
Livestock farms (other than poultry and dairy farms and livestock ranches)	2,223	49.7	13.2	37.1	948	26.6	14.4	59.0
Livestock ranches	655	7.2	26.5	66.3	278	2.9	18.0	79.1
General	480	6.1	19.0	74.9	106	---	1/	1/
Miscellaneous	422	44.2	26.9	28.9	71	44.4	24.0	31.6

1/ Data withheld to avoid disclosure of operations.

Source: Data derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

Table 6.--Number and sales of farms, by specified value of sales, and their percentage of commercial farms, by type of farm and by geographic region, 1964

Type of farm	North			South			West		
	All commercial farms	Farms with sales of $100,000 or more as a percentage of all commercial farms	Farms with sales of $1,000,000 or more as a percentage of all commercial farms	All commercial farms	Farms with sales of $100,000 or more as a percentage of all commercial farms	Farms with sales of $1,000,000 or more as a percentage of all commercial farms	All commercial farms	Farms with sales of $100,000 or more as a percentage of all commercial farms	Farms with sales of $1,000,000 or more as a percentage of all commercial farms
All commercial farms	No.	Pct.	Pct.	No.	Pct.	Pct.	No.	Pct.	Pct.
Cash-grain	309,860	0.1	---	66,438	1.6	---	27,955	2.3	1/
Tobacco	3,221	1.2	0.3	168,163	1/	1/	6,256	---	---
Cotton	3,484	1.3	---	154,336	1.6	1/	8,950	15.7	0.5
Other field crops	7,996	11.8	0.1	18,184	2.2	1/	5,065	10.1	0.6
Vegetables	9,005	2.6	1/	9,137	4.3	0.1	32,425	19.0	1.2
Fruit and nut	12,236	2.5	1/	12,595	6.0	0.3	6,238	4.5	0.1
Poultry	28,884	5.3	0.1	46,998	4.7	0.4	22,220	15.6	0.5
Dairy	286,765	0.1	1/	57,982	1.2	0.1	25,332	7.2	1/
Ranches	6,377	3.0	0.1	34,573	1.7	1/	38,585	4.2	0.2
Other livestock	342,499	1.4	1/	133,445	0.5	0.1	24,361	3.1	0.4
General	98,840	0.2	---	78,779	0.6	1/	11,389	4.8	0.2
Miscellaneous	27,920	2.7	0.1	39,219	1.1	1/		3.9	0.1

	North			South			West		
	Sales	Sales as a percentage of all commercial farm sales		Sales	Sales as a percentage of all commercial farm sales		Sales	Sales as a percentage of all commercial farm sales	
All commercial farms	Mil. dol.	Pct.	Pct.	Mil. dol.	Pct.	Pct.	Mil. dol.	Pct.	Pct.
Cash-grain	3,882	1.4	---	1,010	16.9	---	617	20.3	1.2
Tobacco	48	71.0	49.7	1,071	0.9	---	---	---	---
Cotton	64	10.5	---	1,903	22.9	0.2	467	68.6	22.8
Other field crops	405	44.7	1.9	323	33.6	9.8	561	61.3	30.1
Vegetable	176	30.1	2/	228	71.5	2/	453	79.1	27.7
Fruit and nut	235	24.1	2/	477	66.5	2/	904	42.1	8.2
Poultry	906	35.5	3.0	1,596	32.6	4.8	417	64.2	15.1
Dairy	3,629	1.4	2/	981	15.0	2/	745	44.4	2/
Ranches	133	35.6	6.1	470	36.9	10.6	806	53.8	27.2
Other livestock	6,034	18.3	4.2	1,001	29.4	13.6	1,260	65.5	44.4
General	1,065	2.7	---	835	10.9	2/	721	49.9	2/
Miscellaneous	462	40.4	6.8	258	44.1	6.6	228	53.4	9.8

1/ Less than 0.05 percent.
2/ Data withheld to avoid disclosure of operations.

Source: 1964 Census of Agriculture, Vol. II, Ch. 10, table II, and derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

Table 7.--Value of products sold by farms with sales of $100,000 or more, and percentage their sales are of all farm sales, by source of sales, 1959 and 1964

Farm products sold by source	Value of sales		Percentage of all farm sales	
	1959	1964	1959	1964
	Million dollars	Million dollars	Percent	Percent
Farm products	4,981	1/8,533	16.3	24.2
Crops	2,386	4,007	17.7	24.4
Field crops other than vegetable, fruits, and nuts	1,261	2,255	12.0	17.5
Vegetables	371	601	48.9	60.9
Fruits and nuts	438	765	31.0	45.7
Forest products and horticultural specialty products	316	386	38.4	43.9
Livestock and poultry and their products	2,595	4,526	15.1	24.0
Poultry and poultry products	396	1,082	16.8	35.3
Dairy products	297	487	7.4	10.5
Livestock and livestock products other than poultry and dairy	1,902	2,957	17.6	26.5

1/ Does not include income from recreation facilities.

Source: 1964 Census of Agriculture, Vol. I, Ch. 6, table 15.

percent of milk cows on the farm, 3 percent of the acreage in corn harvested for grain, and 7 percent of the acreage of soybeans harvested (table 8).

In 1964, farms with sales of $1 million or more accounted for more than 27 percent of all fattened cattle sold and 21 percent of all vegetables sold. These farms were much less important for other farm products. However, they all reported a large amount of production. Of top-scale farms, 426 sold annually an average 12,000 head of fattened cattle.

Table 8.—Sales, production, or acres harvested on farms with sales of $100,000 or more, by specified size as a percentage of all farms, 1964

Specified products	Unit	Percentage of all farms				
		Total $100,000 or more	$1,000,000 or more	$500,000-$999,999	$200,000-$499,999	$100,000-$199,999
		Percent	Percent	Percent	Percent	Percent
Livestock:						
Cattle and calves	Head sold	23.1	9.2	2.7	4.8	6.4
Cattle fattened on grain	do.	51.3	27.2	5.9	8.4	9.8
Calves fattened on grain	do.	20.9	7.6	3.0	5.3	5.0
Milk cows	Head on farm	5.9	0.4	0.6	1.9	3.0
Steers and bulls	do.	21.4	7.4	2.4	4.9	6.7
Hogs and pigs	Head sold	4.1	0.2	0.2	1.1	2.6
Sheep and lambs	do.	25.4	6.1	3.1	6.8	9.4
Poultry:						
Broilers and other meat-type chickens	Number sold	21.2	4.9	1.8	4.7	9.8
Hens and roosters for slaughter	do.	30.0	4.3	4.8	10.2	10.7
Turkeys	Number raised	57.8	7.8	6.9	18.2	24.9
Specified crops:						
Corn for grain	Acres harvested	3.1	0.1	0.2	0.7	2.1
Corn for silage, fodder and hogged	do.	6.0	0.4	0.6	1.7	3.3
Wheat	do.	4.6	0.2	0.3	1.1	3.0
Rice	do.	37.3	1.5	2.6	12.3	20.9
Sorghum for all purposes	do.	14.8	0.8	1.3	4.1	8.6
Soybeans for beans	do.	7.1	0.1	0.4	2.0	4.6
Soybeans for beans	Bushels harvested	7.0	0.1	0.4	2.0	4.5
Peanuts for nuts	Acres harvested	5.5	0.1	0.3	1.2	3.9
Field seed	do.	7.8	1.9	0.9	2.3	2.7
Irish potatoes	do.	46.2	6.0	5.1	15.1	20.0
Sugarbeets for sugar	do.	29.9	3.5	3.4	10.8	12.2
Sugarbeets for sugar	Tons harvested	35.3	4.4	4.1	13.0	13.8
Vegetables	Sales in dollars	40.3	9.2	6.5	13.2	11.4
Vegetables	Acres harvested	60.9	21.3	11.1	16.0	12.5
Land in orchards	Acres planted	31.8	7.9	4.2	9.6	10.1
Nursery and greenhouse products	Sales in dollars	52.6	9.4	10.6	17.9	14.7
Cotton	Bales harvested	29.9	4.5	3.3	9.5	12.6
Tobacco	Pounds harvested	2.0	0.5	0.1	0.5	0.9

Source: Data derived from special tabulation of the 1964 Census of Agriculture made available by Bur. of Census and from Census of Agriculture, Vol. II, Ch. 6, table 15.

For the 200 topscale farms reporting vegetables sold, the average was 1,500 acres in harvested vegetables. For broilers, the 32 topscale farms sold about 3 million broilers per farm. The 195 topscale farms reporting cotton produced an average 3,400 bales per farm; 48 topscale farms averaged 1,200 milk cows; 67 topscale farms sold 20,000 sheep and lambs; 17 of these farms averaged more than half a million pounds of tobacco; and 188 topscale farms averaged 1,800 acres of orchards (table 9).

Census data show that, in 1964, many of the farms with sales of $100,000 or more produced more than one main product, and had considerable sideline production. 6/ But, however large in absolute terms, this sideline production represented only a small fraction of the total production of these farms. As shown below, the 31,401 largest farms are highly specialized in their production.

Specialization of Production

The degree of specialization of production was measured by the percentage that production of the main product or products was of total production. It is evident that production is highly specialized for all sizes of farms. However, the degree of specialization increases with the size of farm, except for tobacco, cotton, vegetable, and dairy farms. In 1964, sales of the main products accounted for more than 90 percent of total farm sales by most of the largest farms. The lower degree of specialization on cotton and especially tobacco farms is due mainly to the acreage allotment regulations for these two crops and to their more exclusive Census classification. In 1964, sales of dairy products by the largest dairy farms amounted to only 86.6 percent of total farm sales by these farms. However, if sales of calves--which probably should be considered one of the main products of dairy farms--are added, the percentage rises above the 90-percent mark. The apparently lower degree of specialization on vegetable farms is because many of these farms (especially in California) grow potatoes, sugarbeets, and a few other field crops not classified by Census as vegetables (table 10).

PRODUCTION RESOURCES ON THE LARGEST FARMS

The largest farms are becoming economically more important not only through their increasing commercial production, but also through the increasing value of their production expenditures, their greater use of hired labor, by the increasing acreage they operate, and by the increasing value of their farm equipment. These increases also mean, of course, that their net production increase, in a value-added sense, is less than their gross sales would suggest.

Purchased Inputs

In 1959, the largest farms accounted for 16 percent of all feed bought by farmers, and in 1964, this proportion increased to 29 percent. For the same period, purchases of livestock and poultry increased from 28 to 39 percent, purchased seed from 15 to 17 percent, purchased fuel and oil from 8 to 11 percent, expenses for machine hire from 15 to 24 percent, and expenses for hired labor from 30 to 40 percent (table 11).

6/ 1964 Census of Agriculture, Vol. II, Ch. 6, p. 609.

Table 9.--Average and total production, sales, or acres harvested on farms with sales of $1 million or more and as a percentage of all farms, 1964

Specified product	Unit	Farms reporting	Average per farm reporting	Total by farms reporting	Total as percentage of total for all farms
Livestock and poultry sold alive or on farms		Number	Units 1/	Units 1/	Percent
Livestock:					
Cattle and calves	Head sold	560	10,297	5,766,549	9.2
Cattle fattened on grain	do.	426	12,019	5,120,146	27.2
Calves fattened on grain	do.	54	4,801	259,233	7.6
Milk cows	Head on farm	48	1,225	58,804	0.4
Steers and bulls	do.	542	3,989	2,161,789	7.4
Hogs and pigs	Head sold	72	2,058	148,153	0.2
Sheep and lambs	do.	57	19,981	1,338,739	6.1
Poultry:					
Broilers and other meat-type chickens	Number sold	32	2,922,213	93,510,811	4.9
Hens and rooster for slaughter	do.	83	105,638	8,767,981	4.3
Turkeys	Number raised	32	253,966	8,126,906	7.8
Specified crops:					
Corn for grain	Acres harvested	80	538	43,057	0.1
Corn for silage, fodder and hogged	do.	133	294	39,146	0.4
Wheat	do.	123	607	74,603	0.2
Rice	do.	21	1,302	27,345	1.5
Sorghum for all purposes	do.	154	478	73,611	0.8
Soybeans for beans	do.	28	866	24,249	0.1
Soybeans for beans	Bushels harvested	28	20,541	575,139	0.1
Peanuts for nuts	Acres harvested	5	357	1,784	0.1
Irish potatoes	do.	73	965	70,465	6.0
Sugarbeets for sugar	do.	106	460	48,782	3.5
Sugarbeets for sugar	Tons harvested	106	9,582	1,015,662	4.4
Vegetables	Acres harvested	200	1,050,898	210,179,545	21.3
Vegetables	Sales in dollars	200	1,543	308,693	9.2
Land in orchards	Acres planted	188	1,787	335,969	7.9
Nursery and greenhouse products	Sales in dollars	69	961,184	66,321,722	9.4
Cotton	Bales harvested	195	3,377	658,442	4.5
Tobacco	Pounds harvested	17	552,505	9,392,595	0.5

1/ See unit column.

Source: Data derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

Table 10.--Sales of the main product or group of products as a percentage of total sales, by type and size of farm, 1964

Type of farm	Sales of main product or group of products as a percentage of total farm sales of -- 1/			
	The largest farms 2/	Large farms 2/	Medium-sized farms 2/	Small farms 2/
	Percent	Percent	Percent	Percent
Cash-grain	91.1	84.2	81.5	85.9
Tobacco	31.4	73.9	80.2	83.5
Cotton	69.9	74.7	77.3	83.8
Other field crops	93.8	91.3	87.9	87.0
Vegetables 3/	84.9	81.7	80.9	80.4
Fruit and nut	94.4	94.2	94.1	93.0
Poultry	95.6	92.4	89.8	83.7
Dairy 4/	86.6	77.1	74.0	70.4
Other livestock farms and ranches	94.2	82.0	77.1	85.1

1/ Indian reservations, institutional farms, and other special farms are not included.
2/ Farm sizes are measured as follows: The largest--sales of $100,000 or more; large--$20,000 through $99,999; medium--$5,000 through $19,999; and small--less than $5,000.
3/ The lower percentage is because many farms (especially in California) grow potatoes, sugarbeets, and other field crops not classified by Census as vegetables.
4/ If the sale of calves is added, the percentage would be over 90 percent.

Source: Derived from 1964 Census of Agriculture, Vol. 11, Ch. 10, tables 9-18 and Vol. II, Ch. 6, table 16.

Table 11.—Specified purchased inputs on farms with sales of $100,000 or more, and as a percentage of total for all farms, by specified size, 1959 and 1964 1/

Specified purchased inputs	1959 purchased inputs on farms with sales of $100,000 or more			1964 purchased inputs on farms with sales of $100,000 or more			1964 purchased inputs on farms with sales of $100,000 or more, by specified size, as a percentage of total for all farms			
	Total	Average per farm	As a percentage of purchased inputs of all farms	Total	Average per farm	As a percentage of purchased inputs of all farms	$1,000,000 or more	$500,000-$999,999	$200,000-$499,999	$100,000-$199,999
	Million dollars	Dollars	Percent	Million dollars	Dollars	Percent	Percent	Percent	Percent	Percent
Feed for livestock and poultry	737	36,889	15.5	1,576	50,189	28.7	8.7	3.6	7.3	9.0
Purchase of livestock and poultry	1,095	54,808	28.4	1,616	51,463	38.8	16.1	4.6	8.0	10.0
Machine hire	118	5,906	14.7	208	6,624	23.9	5.4	3.3	7.6	7.6
Hired labor	789	39,491	30.1	1,123	35,763	40.6	10.9	5.7	11.4	12.1
Seeds, bulbs, plants and trees	73	3,654	14.8	110	3,503	16.7	2.4	2.1	5.4	6.7
Fertilizer	102	5,105	8.5	276	8,790	15.6	3.4	1.8	4.3	6.0
Gasoline and other petroleum oil and fuel	116	5,806	7.5	194	6,178	10.9	1.6	1.1	3.2	5.0
Total	3,030	151,659	19.9	5,103	162,510	29.0	9.2	3.7	7.4	8.9

1/ Indian reservations, institutional farms, and other special farms are not included.

Source: 1959 Census of Agriculture, Vol. V, Part 7, table 6; 1964 Census of Agriculture, Vol. II, Ch. 6, table 16; and a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

A large proportion of purchased inputs are made on farms with sales of $1 million or more. In 1964, these topscale farms accounted for 9 percent of all purchased feed, 16 percent of the value of all livestock and poultry bought alive, 11 percent of the hired labor wage bill, and 5 percent of all expenses for machine hire. Proportions of other purchased inputs by these farms were much smaller (table 11).

The value of purchased inputs as a proportion of gross sales of farm products is directly related to size of farm. In 1964, on medium-sized farms the value of specified purchased inputs amounted to 42 percent of the value of all farm products sold, on large farms, 48 percent, and on the largest farms, 60 percent.7/ The relatively high proportion of purchased inputs by small farms is due to special production conditions on many part-time and part-retirement farms. On farms with sales of $1 million or more, specified purchased inputs amounted to 68 percent of their total sales. This proportion was mostly due to increasing expenditure for purchased feed, livestock, and hired labor (table 12).

Hired Labor

In 1959, the farms with sales of $100,000 or more used about 390,000 man-years of hired labor--30 percent of total hired work used on all farms; in 1964, they used 440,000 man-years of hired labor--40 percent of all hired work. Furthermore, the concentration of hired labor on the largest farms and their dependence on that labor increases with size of farm. In 1964, the 919 farms with sales of $1 million or more accounted for 11 percent of the total hired labor bill on farms. These farms averaged 130 man-years of hired labor per farm. Included in the man-year estimate per farm were 86 regular workers with 150 days or more of work during 1 year (table 13).8/

A classification of all farms by their use of hired labor shows that an overwhelming majority of farms either do not employ hired labor at all or employ very little hired labor. Family labor is responsible for most of total farm production. In 1964, about 50 percent of all farms had no hired labor and accounted for about a fifth of all farm products sold. An additional 38 percent used less than one-half man-years of hired labor and had 30 percent of total farm marketings. Together, these farms without hired labor or with little hired labor constituted 88 percent of all farms and accounted for 50 percent of all farm products sold. However, not all farms used so little hired labor. As shown in table 13, use of hired labor increases directly with the size of farm. Only 2 percent of the largest farms had no hired labor, and accounted for 1 percent of all sales by the largest farms. But 21 percent had more than 15 man-years of hired labor and accounted for 43 percent of all sales by the largest farms (table 14).

7/ Specified purchased inputs are feed, livestock and poultry bought alive, machine hire, hired labor, seed, fertilizer, fuel, and oil.

8/ For the number of regular workers (working 150 days or more during one year) see table 28.

Table 12.--Specified purchased inputs as a percentage of total farm sales by size of farm, 1964

Item	Size of farm in value of sales								
	The largest					Large--	Medium--	Small--	All farms 1/
	Total	$1,000,000 or more	$500,000-$999,999	$200,000-$499,999	$100,000-$199,999	$20,000-$99,999	$5,000-$19,999	less than $5,000	
	Million dollars								
Total farm sales	8,539	2,367	1,067	2,253	2,852	13,588	10,267	2,754	35,148
	Purchases as a percentage of sales								
	Percent								
Purchased inputs as a percentage of sales:									
Feed for livestock and poultry	18.4	20.4	18.4	17.8	17.4	15.6	12.9	17.1	15.6
Livestock	17.2	27.5	16.5	12.8	12.4	11.8	6.8	9.0	11.9
Poultry	1.7	0.9	1.6	2.0	2.2				
Machine hire	2.4	2.0	2.7	2.9	2.3	2.0	2.6	4.1	2.4
Hired labor	13.2	12.9	15.0	14.2	11.9	7.5	4.7	5.2	7.9
Seeds, bulbs, plants, and trees	1.3	0.7	1.3	1.6	1.6	1.7	2.2	3.2	1.9
Fertilizer	3.2	2.6	3.0	3.4	3.7	5.1	5.6	8.1	5.0
Fuel and oil	2.3	1.2	1.9	2.5	3.1	4.5	6.8	10.3	5.1
Total	59.7	68.2	60.4	57.2	54.6	48.2	41.6	2/57.0	49.8

1/ Indian reservations, institutional farms, and other special farms are not included.
2/ The relatively high proportion was due to the special organization of the many part-time and part-retirement units in this group.

Source: Derived from special tabulation of the 1964 Census of Agriculture made available by Bur. of Census and from Vol. II, Ch. 6, table 15, of the 1964 Census of Agriculture.

Table 13.--Wage bill by size of farm, all farms, 1964

Size of farm in value of sales	Farms	Wage bill		Estimated man-years of hired labor per farm 1/
		Value	Percentage of all farms	
	Number	Million dollars	Percent	Man-years
All farms	2/ 3,155,679	2/ 2,770	100.0	0.3
The largest:				
$1,000,000 or more	919	304	11.0	130.3
$500,000-$999,999	1,574	160	5.8	39.9
$200,000-$499,999	7,760	320	11.5	16.2
$100,000-$199,999	21,148	339	12.2	6.3
Total	31,401	1,123	40.5	14.1
Large:				
$20,000-$99,999	370,411	1,021	36.9	1.1
Medium:				
$5,000-$19,999	971,710	482	17.4	0.2
Small:				
Less than $5,000	1,782,157	144	5.2	---

1/ Man-years estimated by dividing the wage bill by the cost of one year of full time work by a male worker.

2/ Indian reservations, institutional farms, and other special farms are not included.

Source: Data derived from the 1964 Census of Agriculture, Vol. II, Ch. 6, table 15, and from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

Table 14.--Farms and farm sales by size of farm and by man-years of hired labor, 1964

Man-years of hired labor	Percentage distribution of specified groups of farms 1/									
	All farms 2/		The largest		Large		Medium		Small	
	Number	Sales	Number	Sales	Number	Sales	Number	Sales	Number	Sales
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
None	49.8	19.4	2.1	1.3	15.7	13.6	35.0	32.6	65.9	54.4
Less than 0.5	38.0	30.5	3.9	2.2	35.4	30.6	50.3	50.4	32.5	42.6
0.5-0.9	4.9	8.3	3.3	1.9	13.2	12.6	8.5	9.4	1.2	2.3
1.0-1.4	2.6	6.5	5.7	3.3	10.9	11.4	3.5	4.2	0.3	0.5
1.5-2.4	2.1	7.3	10.5	6.3	11.3	12.9	2.0	2.5	0.1	0.2
2.5-4.9	1.5	8.2	20.7	13.7	9.1	12.0	0.6	0.8	3/	3/
5.0-6.9	0.4	3.3	11.2	8.2	2.2	3.3	0.1	0.1	3/	3/
7.0-9.9	0.3	2.9	10.8	8.8	1.2	2.0	3/	3/	3/	3/
10.0-14.9	0.2	3.0	11.0	10.9	0.6	1.1	3/	3/	3/	3/
15.0 and over	0.2	10.6	20.8	43.4	0.2	0.5	3/	3/	3/	3/
All farms	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

1/ Farm sizes are measured as follows: The largest--sales of $100,000 or more; large--$20,000 through $99,999; medium--$5,000 through $19,999; and small--less than $5,000.

2/ Indian reservations, institutional farms, and other special farms are not included.

3/ Less than 0.05 percent.

Source: Data derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

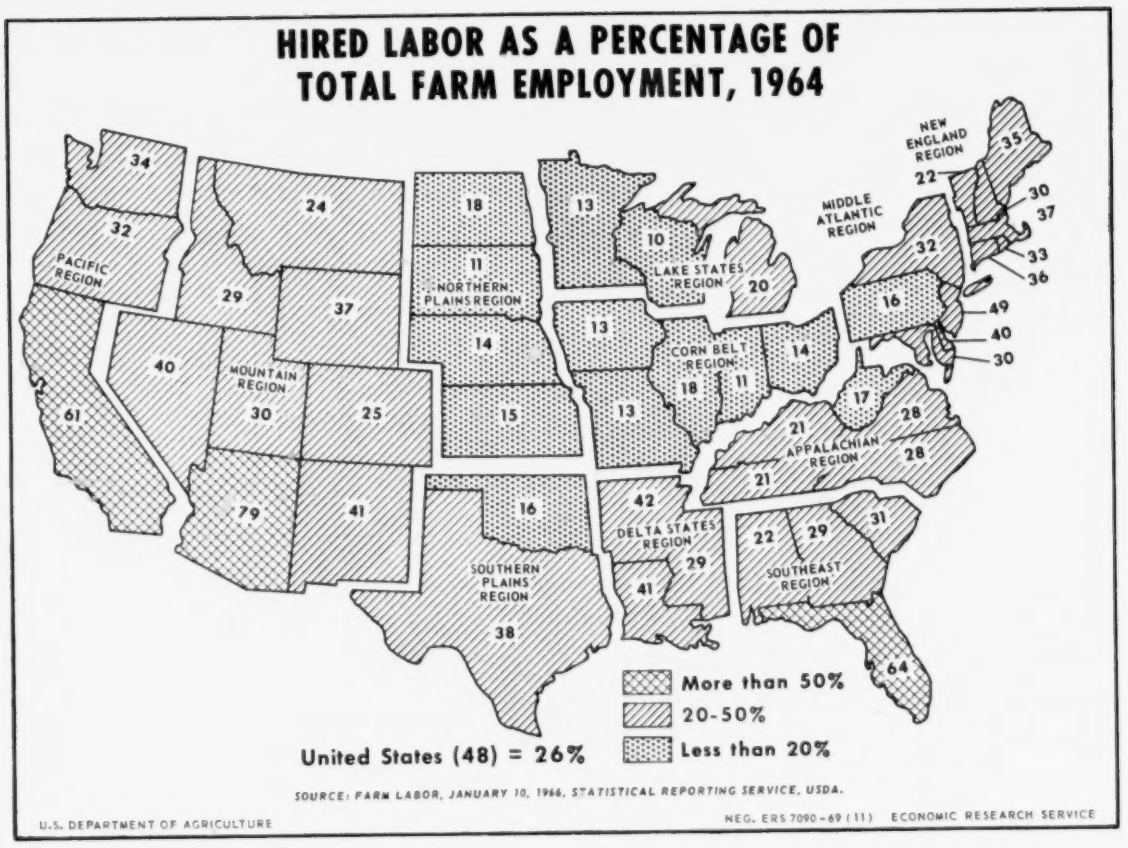


Figure 2

The greater use of hired labor on the largest farms accounts for, to a great extent, the differences between States in the number of workers hired. States where the largest farms were dominant were also States with greater proportions of hired labor on farms (fig. 2). For example, in Arizona, California, and Florida, the largest farms accounted for 78 percent, 69 percent, and 69 percent of all farm products sold. The States' proportions of hired labor employment on farms were 81 percent, 64 percent, and 69 percent. In the Corn Belt and Lake States regions, where the eonomic importance of the largest farms was quite modest, the proportion of hired labor employment on farms was, on the average, below 15 percent (fig. 2).9/

Farmland and Acreage Size

From 1959 to 1964, acreage of farmland increased noticeably on farms with sales of $20,000 or more (table 15). The increase, however, is due more to the expanding number of these farms than to an increase in their acreage. This explanation is reflected in the decreasing average acreage per farm. This decrease is reflected also in the fact that production on

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9/ For a more comprehensive report on farm labor, see W.L. Sellers and T.E. Eichers, "Farm Labor Inputs," USDA, ERS, Statis. Bul. No. 438, June 1969.

Table 15.--Acreage and use of land, by size of farm, and as a percentage of total for all farms, 1959 and 1964

Size of farm in value of sales 1/	Farmland 2/				Acreage of farmland by specified uses					
	Acreage 3/		Acres per farm		Cropland		Woodland		Pastureland except cropland and woodland 4/	
	1959	1964	1959	1964	1959	1964	1959	1964	1959	1964
	Million acres	Million acres	Acres	Acres	Million acres	Million acres	Million acres	Million acres	Million acres	Million acres
The largest	114	121	5,686	3,854	21	29	9	8	80	80
Large	305	335	1,041	905	113	121	25	26	159	162
Medium	402	375	355	386	205	166	49	42	131	137
Small 5/	259	230	115	159	109	80	71	61	64	73
All farms	1,080	1,061	292	336	448	396	154	137	434	452
	Percentage of total for all farms									
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
The largest	10.6	11.4	---	---	4.7	7.3	5.9	5.8	18.4	17.7
Large	28.2	31.6	---	---	25.1	30.6	16.2	19.0	36.6	35.8
Medium	37.2	35.3	---	---	46.0	41.9	31.8	30.7	30.2	30.3
Small 5/	24.0	21.7	---	---	24.2	20.2	46.1	44.5	14.8	16.2
All farms	100.0	100.0	---	---	100.0	100.0	100.0	100.0	100.0	100.0

1/ Farm sizes are measured as follows: The largest--sales of $100,000 or more; large--$20,000 through $99,999; medium--$5,000 through $19,999; and small--less than $5,000.

2/ Indian reservations, institutional and other special farms are not included.

3/ Acreage for farmland usage does not add to total acreage. The difference is accounted for by acres in houses, lots, roads, and wasteland, which are not included.

4/ Mostly grazing land.

5/ Operator households on these farms have, on the average, more nonfarm than farm income.

Source: 1959 Census of Agriculture, Vol. II, Ch. 11, table 5 and Vol. 5, part 7, table 6, and 1964 Census of Agriculture, Vol. II, Ch. 6, tables 15 and 16.

many of the largest farms is increasingly less dependent on the land. Such decreasing dependence is true for farms with cattle feeding, broilers, other meat production, and egg production, as well as for dry-lot dairy establishments.

Farms with sales of $100,000 or more accounted for about 10 percent of total farmland in both 1959 and 1964. This proportion increased from 5 to 7 percent for cropland. The percentage did not change for woodland, and decreased slightly for grazing land (table 15).

Not many of the 31,401 largest farms are extremely large in acreage. About 60 percent have less than 1,000 acres, and 3 percent have less than 10 acres (app. table 14). The average acreage of the largest farms ranges from 2,770 to 12,121 acres, depending on their size in value or sales. However, the greater part of their acreage--ranging from about 60 to 70 percent, consists of grazing land; 20 to 28 percent is cropland; and 5 to 10 percent, woodland (table 16).

Farm Equipment

The largest farms do not account for a large percentage of farm equipment. In 1964, they accounted for 5 percent of all motortrucks on farms, 4 percent of all tractors other than garden tractors (but 14 percent of crawler tractors), and 3 percent of field forage harvesters (table 17).

However, merely counting numbers is an incomplete measurement. This kind of measure does not show the importance of such equipment on the largest farms. Their machines and equipment are larger and technically more efficient than those on other farms (table 28).

LAND TENURE ON THE LARGEST FARMS

The pattern of tenure under which farmland is operated--the land tenure--is not changing significantly, but this pattern differs by size of farm. However, the tenure under which farm operators are controlling their land--the tenure of farm operator--is changing more significantly, both over time and by size of farm.

Tenure Under Which Land Is Operated

All the technical and economic changes in farming do not appear to be altering the traditional land tenure pattern. 10/ From 1944 to 1964, the proportion of land operated under ownership, rental, and paid management did not change significantly. Throughout this period, about 55 percent of the land in farms was operated by owners, 35 percent, by renters, and about 10 percent, by paid managers (app. table 15).

On the farms with sales of $100,000 or more, the land tenure pattern differs slightly--with less land under ownership and more under rental and paid management. A difference in land tenure depending on the size

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10/ We are speaking here of the tenure under which farmland is operated, disregarding the composition of operating units. For example, in a part-owner farm, part of the land is owned by the operator, and another part is rented.

Table 16.--Amount and specified use of farmland on farms with sales of $100,000 or more, 1964

Size of farm in value of sales	Farms	Farmland		Average acreage per farm	Percentage of farmland in-- 1/		
		Amount	As percentage of U.S. total		Cropland	Woodland	Pastureland except cropland and woodland 2/
	Number	1,000 acres	Percent	Acres	Percent	Percent	Percent
$1,000,000 or more	919	11,139	1.0	12,121	27.6	4.5	61.8
$500,000-$999,999	1,574	13,162	1.2	8,362	19.7	9.8	68.0
$200,000-$499,999	7,760	38,130	3.4	4,914	21.1	5.9	70.6
$100,000-$199,999	21,148	58,590	5.3	2,770	26.0	7.4	64.4
Total	31,401	121,021	10.9	3,854	23.9	6.9	66.5

1/ Acreage for farmland usage does not add to 100 percent. The difference is accounted for by acres in houses, lots, roads, and wasteland, which are not included.
2/ Mostly grazing land.

Source: Data derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

Table 17.--Farm equipment on farms with sales of $100,000 or more as a percentage of specified equipment on all farms, by specified size, 1964

Farm equipment	All farms	Farms with sales of $100,000 or more				
		Total	$1,000,000 or more	$500,000-$999,999	$200,000-$499,999	$100,000-$199,999
	Thousands	Percent	Percent	Percent	Percent	Percent
Motortrucks	3,030	4.8	0.6	0.5	1.3	2.4
Tractors excluding garden	4,787	3.8	0.3	0.3	1.1	2.1
Crawler tractors	186	13.8	2.4	1.4	4.2	5.8
Wheel tractors	4,601	3.4	0.2	0.3	1.0	1.9
Grain combines	910	2.3	0.1	0.1	0.6	1.5
Cornpickers	690	1.2	NA	NA	NA	NA
Pickup balers	751	1.5	NA	NA	NA	NA
Field forage harvesters	316	3.4	NA	NA	NA	NA

NA = Not available.

Source: Data derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

of the largest farms is noticeable on farms with sales of $500,000 to $999,999. Both the proportions of land under ownership and rental were smaller--46 percent and 30 percent--and the proportion of land under paid management was the largest--24 percent (table 18).

Tenure of Farm Operators

The proportion of farms operated by tenants decreased from 1959 to 1964, and the proportion operated by part owners increased. The proportion operated by full owners and paid managers did not change much. On the largest farms, the percentage operated by full and part owners increased slightly, and the percentage operated by tenants and paid managers decreased slightly.

However, the tenure of farm operators differs greatly by size of farm. In 1964, the pattern of these differences was clearly outlined. The proportion of farms operated by full owners and tenants decreased as the size of farm increased. The proportion of part owners, on the contrary, increased until the size of farm with sales of $200,000 was reached, but decreased on farms above that size. The proportion of farms under paid management increased from 0.4 percent of all medium-sized farms to 45 percent of all farms with sales of $1 million or more (table 19). 11/

OPERATORS ON THE LARGEST FARMS

The characteristics of operators on the largest farms differ from those of operators on smaller farms. Operators of the largest farms tend to be less involved in off-farmwork, to rely more on farm income, but a larger proportion of them do not reside on the farm. They do not differ much by age, but have a higher educational attainment than operators of smaller farms.

Off-Farmwork

The percentage of operators reporting off-farmwork has not changed much in recent years. It was 45 percent in 1959 and 46 percent in 1964. The proportion of operators reporting 200 or more days of off-farmwork increased from 24 to 26 percent during that period. However, the percentage of operators reporting off-farmwork is lower on larger farms. This is especially true for operators reporting 200 or more days of off-farmwork.

In 1964, on medium-sized farms, about 36 percent of all operators reported off-farmwork, and 12 percent reported 200 or more days of such work. On the largest farms, these proportions were 16 and 8 percent (table 20).

Operators' off-farmwork is practically all in nonfarm jobs. A small amount of work was done by farmers on farms other than their own.

11/ Because of the special structure of their many residential farms, full owners predominated on small farms. This fact greatly biases their comparability with other farms.

Table 18.--Tenure under which farmland is operated on farms with sales of $100,000 or more, 1964

Size of farm in value of sales	Total farmland acreage	Percentage of farmland operated under--		
		Ownership	Rental	Paid management
	Million acres	Percent		
All farms with sales of:				
$100,000 or more	121	49	39	12
$1,000,000 or more	11	51	36	13
$500,000-$999,999	13	46	30	24
$200,000-$499,999	38	48	41	11
$100,000-$199,999	59	50	40	10

Source: Data derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

On all sizes of farms, nonfarm jobs accounted for more than 90 percent of total work done by operators outside their farms (table 21).

The percentage of operators reporting off-farm jobs on the largest farms and the time they spent on those jobs differs by State. However, in all States, operators on larger farms tend to spend less time on off-farm jobs than do operators on smaller farms.12/

Off-Farm Income

Dependence of the farm population on off-farm income is not a new development, but from 1947 to 1967, this dependence increased. Income from off-farm sources in the first few years after World War II accounted for about 32 percent of total personal income of the farm population; in 1967, such income was estimated to have accounted for 42 percent.13/

The importance of income from off-farm sources declines as the size of farm increases. Thus, in 1964, on small farms, 89 percent of the operators reported household off-farm income; on medium-sized farms,

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12/ For more detailed information on the nonfarmwork of operators of farms with sales of $100,000 or more, see app. table 16; for operators of all farms and members of their households, see app. table 17.

13/ USDA, ERS, Farm Income Situation 211, July 1968, table 5H, p. 48.

Table 19.--Percentage distribution of farms by tenure of farm operators for all farms, by size of farm, 1959 and 1964

Tenure of farm operators	Farms with sales of $100,000 or more						Farms with sales less than $100,000, 1964 1/		
	1959	1964							
	Total	Total	$1,000,000 or more	$500,000-$999,999	$200,000-$499,999	$100,000-$199,999	Large	Medium	Small
	Percent								
Full owners	29.9	30.1	18.8	25.7	29.6	31.1	29.7	41.6	72.5
Part owners	44.4	45.4	30.3	35.6	43.6	47.5	46.2	35.2	14.3
Managers	13.1	12.0	44.9	29.1	16.3	7.7	1.6	0.4	0.2
Tenants	12.6	12.5	6.0	9.6	10.5	13.7	22.5	22.8	13.0
All farm operators	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

1/ Farm sizes are measured as follows: The largest--sales of $100,000 or more; large--$20,000 through $99,999; medium--$5,000 through $19,999; and small--less than $5,000.

Source: Data derived from the 1959 Census of Agriculture, Vol. 5, part 7, table 6; the 1964 Census of Agriculture, Vol. II, Ch. 6, table 15; and from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

Table 20.--Number and percentage of farm operators reporting specified amount of off-farmwork, by size of farm, 1964

Size of farm in value of sales 1/	Operators reporting off-farmwork--				Operators reporting "none" or not reporting	All operators
	1-99 days	100-199 days	200 days and over	Total days		
	Number					
The largest:						
$1,000,000 or more	28	17	87	132	787	919
$500,000-$999,999	55	28	161	244	1,330	1,574
$200,000-$499,999	359	150	687	1,196	6,564	7,760
$100,000-$199,999	1,486	440	1,565	3,491	17,657	21,148
Total	1,928	635	2,500	5,063	26,338	31,401
Large	61,112	10,900	22,450	94,462	275,949	370,411
Medium	182,317	51,375	114,486	348,178	623,532	971,710
Small	203,529	126,064	684,389	1,013,982	768,175	1,782,157
Total 2/	448,886	188,974	823,825	1,461,685	1,693,994	3,155,679
	Number as a percentage of all operators					
	Percent					
The largest:						
$1,000,000 or more	3.0	1.9	9.5	14.4	85.6	100.0
$500,000-$999,999	3.5	1.8	10.2	15.5	84.5	100.0
$200,000-$499,999	4.6	1.9	8.9	15.4	84.6	100.0
$100,000-$199,999	7.0	2.1	7.4	16.5	83.5	100.0
Total	6.1	2.0	8.0	16.1	83.9	100.0
Large	16.5	2.9	6.1	25.5	74.5	100.0
Medium	18.7	5.3	11.8	35.8	64.2	100.0
Small	11.4	7.1	38.4	56.9	43.1	100.0
Total 2/	14.2	6.0	26.1	46.3	53.7	100.0

1/ Farm sizes are measured as follows: The largest--sales of $100,000 or more; large--$20,000 through $99,999; medium--$5,000 through $19,999; and small--less than $5,000.

2/ Indian reservations, institutional farms, and other special farms are not included.

Source: Data derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census, and from the 1964 Census of Agriculture, Vol. II.

Table 21.--Amount and percentage distribution of operators off-farmwork on nonfarm jobs, by size of farm, 1964

Days worked	All farms 1/	Size of farm 2/			
		Largest	Large	Medium	Small
	Days				
On another farm	10,357,458	28,343	638,338	2,479,906	7,210,871
At nonfarm jobs	239,450,675	720,135	8,385,713	39,927,779	190,417,048
Total	249,808,133	748,478	9,024,051	42,407,685	197,627,919
	Percent				
On another farm	4.1	3.8	7.1	5.8	3.6
At nonfarm jobs	95.9	96.2	92.9	94.2	96.4
Total	100.0	100.0	100.0	100.0	100.0

1/ Indian reservations, institutional farms, and other special farms are not included.

2/ Farm sizes are measured as follows: The largest--$100,000 or more; large--$20,000 through $99,999; medium--$5,000 through $19,999; and small--less than $5,000.

Source: 1964 Census of Agriculture, Vol. II, Ch. 6, tables 15 and 16.

74 percent; on large farms, 67 percent; and on the largest farms, only 57 percent.

Differences in the importance of off-farm income, depending on the size of farm, can be indicated by comparing off-farm income with farm marketings. Off-farm income seems to be by far the main source of livelihood for families living on small farms. This proportion is due mostly to the large number of part-time and part-retirement units among small farms. Off-farm income equalled 23 percent of farm marketings on medium-sized farms, 7 percent on large farms, and less than 2 percent on the largest farms (table 22). The significance of off-farm income, however, is greater than that indicated by its comparison with farm marketings. Usually, off-farm income is more nearly net income than that from sales of farm products.

Sources of off-farm income for all members of operators' households also vary by size of farm. The main sources of off-farm income on medium- and small-sized farms are wages and salaries from nonfarm jobs. Off-farm income on larger farms comes primarily from Government payments, rent of farm and nonfarm property, interest, dividends, and similar sources (app. table 18).14/

14/ For more information, see 1964 Census of Agriculture, Vol. 3, part 3, table 6, p. 22.

Table 22.--Off-farm income of all persons in farm operator households as a percentage of farm sales, by size of farm, 1964

Size of farm in value of sales 1/	Operator households		Farm sales	Off-farm income of operator households	Off-farm income as a percentage of farm sales
	Total	Percentage reporting off-farm income			
	Number	Percent	1,000 dollars	1,000 dollars	Percent
Largest	31,401	57.4	8,538,811	146,033	1.7
Large	370,411	67.4	13,587,753	986,305	7.3
Medium	971,710	73.8	10,267,240	2,392,922	23.3
Small	1,782,157	88.5	2,753,891	6,522,434	2/236.8
All farms 3/	3,155,679	81.2	35,147,695	10,047,694	28.6

1/ Farm sizes are measured as follows: The largest--$100,000 or more; large--$20,000 through $99,999; medium--$5,000 through $19,999; and small--less than $5,000.

2/ The high off-farm income percentage of farm sales is due to the great number of part-time and residential farms that had only insignificant farm production.

3/ Indian reservations, institutional farms, and other special farms are not included.

Source: 1964 Census of Agriculture General Report, Vol. II, Ch. 6, tables 15 and 16, pp. 642 and 658.

Off-farm income of operators' households varies by States. For all operators and for operators only on the largest farms, such income generally tends to be smaller in the Middle Atlantic, Lake States, and Corn Belt regions than in the rest of the country and to be largest in the Southern Plains (app. tables 17 and 19).

Residence on Farm

Higher specialization of farm production and greatly extended transportation facilities have increasingly enabled farmers to live away from their farms all or most of the year. The proportion of farmers living on their farms has decreased in recent decades. In 1950, 95 percent of all farm operators lived on farms; in 1964, this proportion was 90.5 percent.15/

The proportion of operators residing on farms was lower on larger farms. While this proportion was 76 percent on farms with sales of $100,000 to $199,999, it was only 42 percent on farms with sales of $1 million or more (table 23).

For the largest farms in their individual groups, no data are available by State on the operator's farm residence. But an analysis of the largest farms as a whole shows that the proportion of farmers not residing

15/ 1964 Census of Agriculture, Vol. 2, Ch. 5, p. 513.

Table 23.--Operators on farms with sales of $100,000 or more reporting residence on or off their farms, 1964

Size of farm in value of sales	Operators reporting as to residence on farm		Operators not reporting	Operators reporting residence on farm as percentage of operators reporting
	Not on farm	On farm		
	Number	Number	Number	Percent
$1,000,000 or more	473	340	106	41.8
$500,000-$999,999	711	751	112	51.4
$200,000-$499,999	2,562	4,885	313	65.6
$100,000-$199,999	4,866	15,717	565	76.4
Total	8,612	21,693	1,096	71.6
U.S. total	290,971	2,773,815	93,071	90.5

Source: Derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

on farms differs greatly by State. For example, in 1964, farmers not residing on their farms accounted for 6 percent of all farm operators in Iowa, 17 percent in California, and more than 24 percent in Florida (fig. 3).

Age of Operator

Except for small farms, no significant difference is found in the age of farm operators by size of farm. In 1964, the average age on small farms was 52 years. This relatively high age is due to the absence of young and middle-aged farmers on these units. More than half the operators on small farms were over 55, and among these, 360,000 were part-retired, with an average age of 71 years.16/ The average age for other sizes of farms ranged from 46 on large farms to 49 on farms with sales of $1 million or more. Farm operators between 35 and 54 accounted for the bulk of farmers on all sizes of farms, except on small units. On the largest farms, the proportions of farmers under 25 and over 55 was somewhat smaller than on medium-sized farms (table 24).

The average age of operators on the largest farms differs slightly by type of farm. In 1964, the age was lowest (46) on the largest cash-grain, cotton, and poultry farms and the largest livestock ranches, and highest (50) on the largest fruit, livestock (other than poultry and dairy), and miscellaneous farms (table 25).

16/ R. Nikolitch, "A Comparison of Age Levels of Farmers and Other Self-Employed Persons," USDA, ERS, Agr. Econ. Rpt. No. 125, Nov. 1967.

Table 24.--Number and percentage distribution of farm operators, by age and by size of farm, 1964 1/

Age of operator	Size of farm in value of sales							
	The largest					Large--$20,000-$99,999	Medium--$5,000-$19,999	Small--Less than $5,000
	$1,000,000 or more	$500,000-$999,999	$200,000-$499,999	$100,000-$199,999	Total			
	Number							
All farm operators	919	1,574	7,760	21,148	31,401	370,411	971,710	1,782,157
Operators by age:								
Under 25	4	5	41	147	197	5,301	19,239	28,433
25-34	60	122	768	2,472	3,422	52,541	109,628	143,390
35-44	243	467	2,308	6,392	9,410	110,546	223,874	309,148
45-54	319	518	2,518	6,623	9,978	113,919	294,218	432,525
55-64	226	306	1,466	3,965	5,963	65,816	233,627	436,383
65 and over	67	156	659	1,549	2,431	22,288	91,124	432,278
Average age 2/	49	48	47	47	47	46	48	52
	Percent							
All farm operators	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Operators by age:								
Under 25	0.4	0.3	0.5	0.7	0.6	1.4	2.0	1.6
25-34	6.5	7.8	9.9	11.7	10.9	14.2	11.3	8.0
35-44	26.5	29.7	29.7	30.2	30.0	29.8	23.0	17.3
45-54	34.7	32.9	32.5	31.3	31.8	30.8	30.3	24.3
55-64	24.6	19.4	18.9	18.8	19.0	17.8	24.0	24.5
65 and over	7.3	9.9	8.5	7.3	7.7	6.0	9.4	24.3

1/ Indian reservations, institutional farms, and other special farms are not included.
2/ Estimated on the basis of data on distribution.

Source: Data derived from the 1964 Census of Agriculture, Vol. II, Ch. 6, table 15 and from a special tabulation of the 1964 Census of Agriculture, made available by Bur. of Census.

Table 25.--Estimated average age of farm operators on farms with sales of $100,000 or more, by type of farm, 1964

Type of farm	Average age of operator
Cash-grain	46
Tobacco	49
Cotton	46
Other field crops	47
Vegetable	47
Fruit and nut	50
Poultry	46
Dairy	47
Livestock ranches	46
Other livestock	50
General	47
Miscellaneous	50

Source: Estimated on the basis of data on distribution of operators by age, 1964 Census of Agriculture, Vol. 2, Ch. 6, table 16, pp. 656 and 657.

The average age of farm operators on farms with sales of $100,000 or more differs also by State and region. The age is highest in New England, West Virginia, Wyoming, Florida, Montana, and Hawaii, and lowest in the Lake States, Corn Belt, and Northern Plains (fig. 4).17/

Educational Attainment

Farmers' educational attainment seems to be related to farm size. The proportion of operators with education is greatest on smaller farms. In 1964, operators with 8 years of school or less accounted for 56 percent of all operators on small farms, 45 percent on medium-sized farms, and 28 percent on large farms, but only 20 percent on the largest farms. On the other hand, operators with 4 years of college accounted for 4 percent of all operators on both small and medium-sized farms and 7 percent on large farms, but 17 percent on the largest farms (table 26).

In 1964, the average level of schooling for all farmers was 11 years for operators under 35, 10.2 for operators between 35 and 44, 9.4 years for those between 45 and 54, 8.7 for those between 55 and 64, and 8.1 for operators 65 and over. But the fact that younger farmers had more education could not explain that those working on farms above the medium-size had the highest educational attainment. As shown in table 24, operators on larger farms are not younger than those on smaller farms. Neither could a comparison by States, age, and educational attainment of operators on commercial farms explain the difference in educational attainment (app. table 20).

17/ For regional differences in average age of operators, see app. table 48.

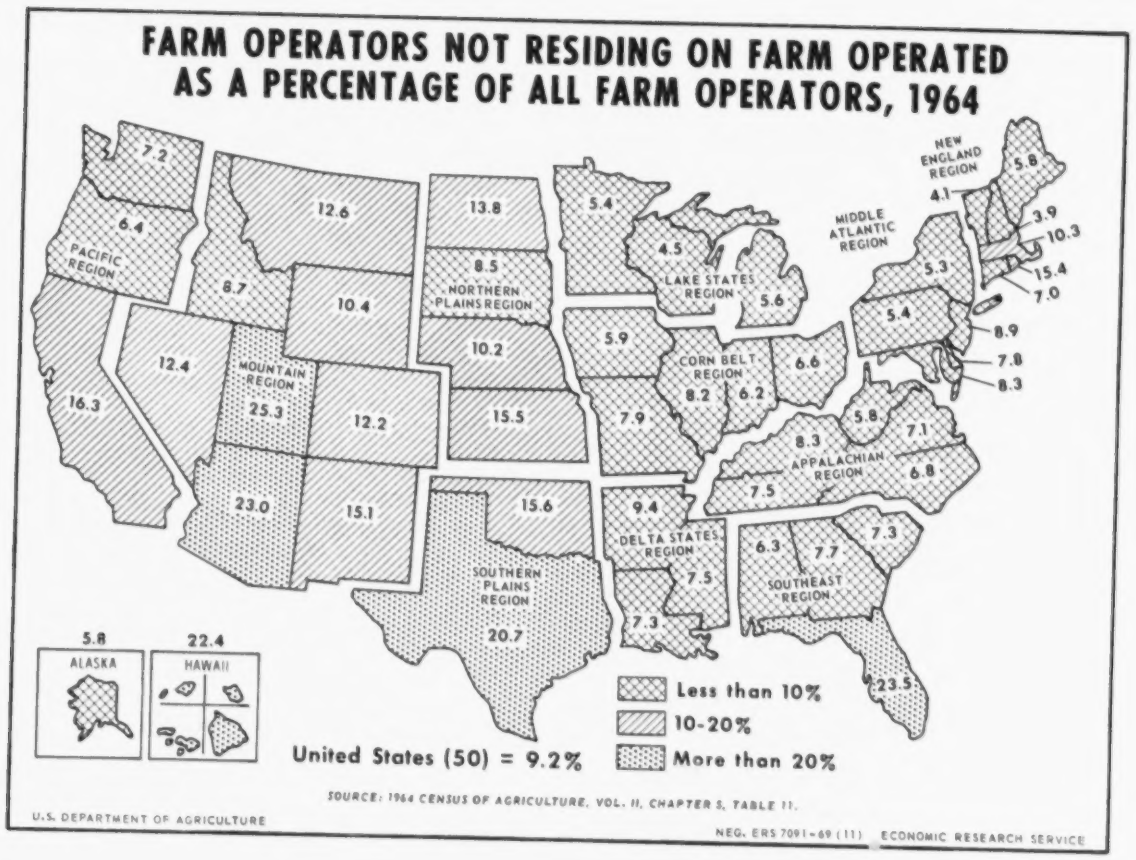

Figure 3

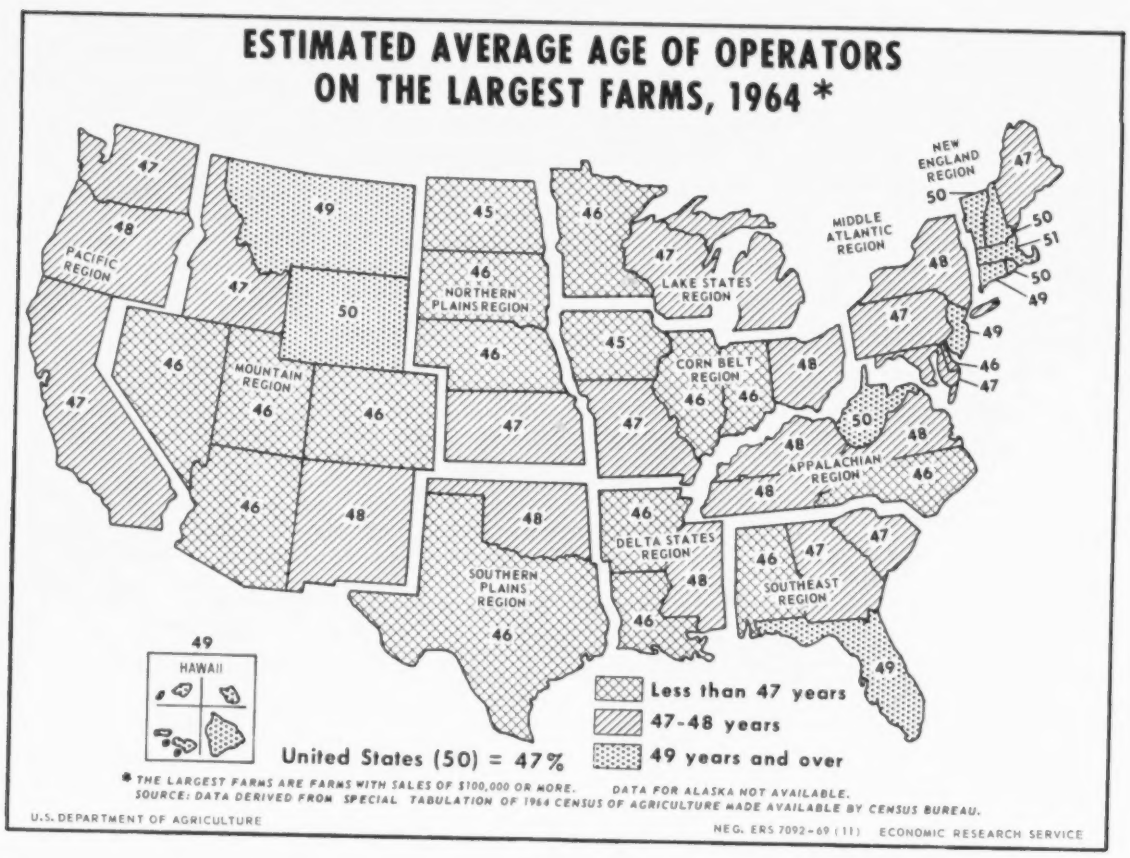

Figure 4

Table 26.--Number and percentage distribution of farm operators of all farms by size of farm and by highest grade of school completed, 1964

Highest grade of school completed	Operators on all farms 1/		Operators by size of farm 2/							
			The largest		Large		Medium		Small	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
All operators	3,155,679	100.0	31,401	100.0	370,411	100.0	971,710	100.0	1,782,157	100.0
Elementary school:										
0-4 years	225,130	7.1	498	1.6	5,927	1.6	36,925	3.8	181,780	10.2
5-7 years	465,550	14.8	1,784	5.7	22,965	6.2	103,973	10.7	336,828	18.9
8 years	851,131	26.9	4,123	13.1	73,341	19.8	292,485	30.1	481,182	27.0
High school:										
1-3 years	535,507	17.0	4,541	14.5	62,970	17.0	163,247	16.8	304,749	17.1
4 years	762,110	[illegible].2	10,438	33.2	142,608	38.5	284,711	29.3	324,353	18.2
College:										
1-3 years	178,833	5.6	4,796	15.3	36,671	9.9	55,387	5.7	81,979	4.6
4 years	137,418	4.4	5,221	16.6	25,929	7.0	34,982	3.6	71,286	4.0
Average grade completed	9.4		11.5		10.7		9.7		8.8	

1/ Indian reservations, institutional farms, and other special farms are not included.
2/ Farm sizes are measured as follows: The largest--$100,000 or more; large--$20,000 through $99,999; medium--$5,000 through $19,999; and small--less than $5,000.

Source: Derived from the 1964 Census of Agriculture Vol. II, Ch. 6, tables 15 and 16. Figures on large, medium, and small farms were adjusted to add to the total number of all operators in each size-group of farms.

FAMILY FARMS

Though the total number of farms was reduced markedly from 1949 to 1964, the proportion that were family farms remained about the same in that period, and their share of marketings changed little. 18/ In 1964, family farms accounted for 95 percent of all farms and 64 percent of the value of all farm products sold. Measured in constant dollars, these proportions were 95 and 69 percent in 1959, and 95 and 63 percent in 1949.

An analysis by size of farm from 1959 to 1964 shows that the proportions of family farms and their marketings increased for all farm sizes, including the largest farms. In 1959, 11 percent of these farms were family farms, accounting for 7 percent of total sales of the largest farms. In 1964, 14.5 percent of the largest farms were family farms, accounting for 8.4 percent of total sales by the largest farms.

The proportions of the number and sales of family-operated farms did not change significantly on small-sized farms. Large family farms expanded considerably from 1959 to 1964 (table 27).

The economic importance of family farms varies greatly by State and region. Family farms are most dominant in the North Central part of the country, as well as in some of the Middle Atlantic and South Central States. In California, Texas, Florida, and a few other States, on the contrary, family farms provide less than half of total farm sales (app. table 21).

The importance of family farms among the largest farms also varies greatly by State. This pattern generally follows the pattern of State and regional differences for all family-operated farms (see app. table 21). Thus, in Iowa, where family-operated units accounted for 91 percent of all farm marketings in 1964, family-operated farms provided more than 45 percent of total marketings by the largest farms. In California, on the contrary, where family-operated units accounted for only 21 percent of all farm marketings, family-operated units accounted for less than 4 percent of total marketings by the largest farms (fig. 5).

Rapid increases in farm technology have increased the quantity of land and other inputs a man can handle per unit of time. In turn, technological changes have greatly expanded the size of a farm business that can be operated by a family. The economic importance of family-operated units among the largest farms, in the greater part of the United States, indicates the capacity of operators to adjust their family operations to large-scale farming.

18/ The essential characteristic of a family farm is not found in the size of its sales, acreage, or capital investment, but in the degree to which productive effort and its reward are vested in the family. The family farm is an agricultural business in which the operator is a risk-taking manager who, with his family, does more than half of the farm work. Statistical information on hired labor is ample and adequate, but very little data is available on operator and family labor. However, the family labor supply on the average farm is estimated to be about 1.5 man-years. To have a convenient working definition, we classify farms not using hired management and using less than 1.5 man-years of hired labor as family farms, and those using more than 1.5 man-years of hired labor or hired management or both as larger-than-family farms.

Table 27.--Number and sales of family farms and larger-than-family farms as a percentage of total for all farms, by size of farm, 1959 and 1964 1/

Size of farm 2/	Number of farms as a percentage of total		Sales as a percentage of total	
	Family farms 3/	Larger-than-family farms 3/	Family farms 3/	Larger-than-family farms 3/
	Percent			
1959:				
Largest	10.8	89.2	7.0	93.0
Large	68.0	32.0	60.8	39.2
Medium	95.8	4.2	94.3	5.7
Small	99.7	0.3	99.5	0.5
Total	95.5	4.5	69.6	30.4
1964:				
Largest	14.5	85.5	8.4	91.6
Large	74.8	25.2	67.9	32.1
Medium	97.0	3.0	96.5	3.5
Small	99.8	0.2	99.7	0.3
Total	95.1	4.9	64.6	35.4

1/ Alaska and Hawaii are not included. Indian reservations, institutional farms, and other special farms are also not included.

2/ Farm sizes are measured as follows: The largest--$100,000 or more; large--$20,000 through $99,999; medium--$5,000 through $19,999; and small--less than $5,000.

3/ For definition, see text, footnote 18.

Source: Data derived from special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

EFFICIENCY ON THE LARGEST FARMS

Studies and information are lacking on the economic and technical efficiency of the largest farms. However, information from the 1964 Census of Agriculture would suggest a greater technical efficiency on these farms. Thus, we find on the largest farms a greater use of fertilizers, as well as a greater yield of production per animal and crops per acre (table 28).

Table 28.--Physical efficiency measures on farms, by size of farm, 1964

Physical efficiency measure	Unit	All commercial farms	Size of farm in value of sales				
			Total, $100,000 or more	$100,000-$199,999	$200,000-$499,999	$500,000-$999,999	$1,000,000 or more
Cropland harvested per tractor (other than garden tractors)	Acres	68	113	110	110	116	142
Corn harvested per cornpicker	do.	80	204	NA	NA	NA	NA
Hay harvested per pickup baler	Tons	170	901	NA	NA	NA	NA
Regular hired workers per farm	Number	3	10	5	12	29	86
Percentage of farms reporting use of:							
Commercial fertilizer	Percent	75.6	77.9	78.6	77.5	76.2	69.0
Wheel tractors	do.	83.9	92.9	92.2	93.8	95.2	96.0
Crawler tractors	do.	5.6	35.8	30.0	44.5	54.2	66.2
Combines (grain and bean)	do.	35.6	36.7	40.1	32.0	23.6	18.2
Motortrucks (including pickups)	do.	74.8	95.2	94.5	96.2	97.6	98.3
Fertilizer used per acre fertilized	Pounds	306	460	370	448	561	689
Value of products sold:							
Milk and cream per milk cow	Dollars	328	560	NA	NA	NA	NA
Eggs per chicken 4 months old and over	do.	4.39	5.39	NA	NA	NA	NA
Vegetables per acre	do.	301	447	325	360	503	681
Nursery products per acre	do.	NA	1,635	1,742	1,590	1,729	1,491
Yield per acre:							
Corn harvested for grain	Bushels	63	78	NA	NA	NA	NA
Soybeans harvested for beans	do.	23	22	22	21	22	24
Wheat	do.	25	31	NA	NA	NA	NA
Alfalfa harvested for hay or dehydrating	Tons	2.5	4.4	4.0	4.6	4.9	5.3
Clover and timothy hay	do.	1.5	1.6	1.6	1.6	1.4	2.0
Irish potatoes	Bushels	317	362	NA	NA	NA	NA
Cotton	Bales	1.1	1.7	1.5	1.8	1.9	2.6
Sugarbeets	Tons	NA	19.9	19.0	20.4	20.5	20.8

Source: Data derived from special tabulation of the 1964 Census of Agriculture made available by Bur. of Census, and from the 1964 Census of Agriculture, Vol. II, Ch. 6, table 15.

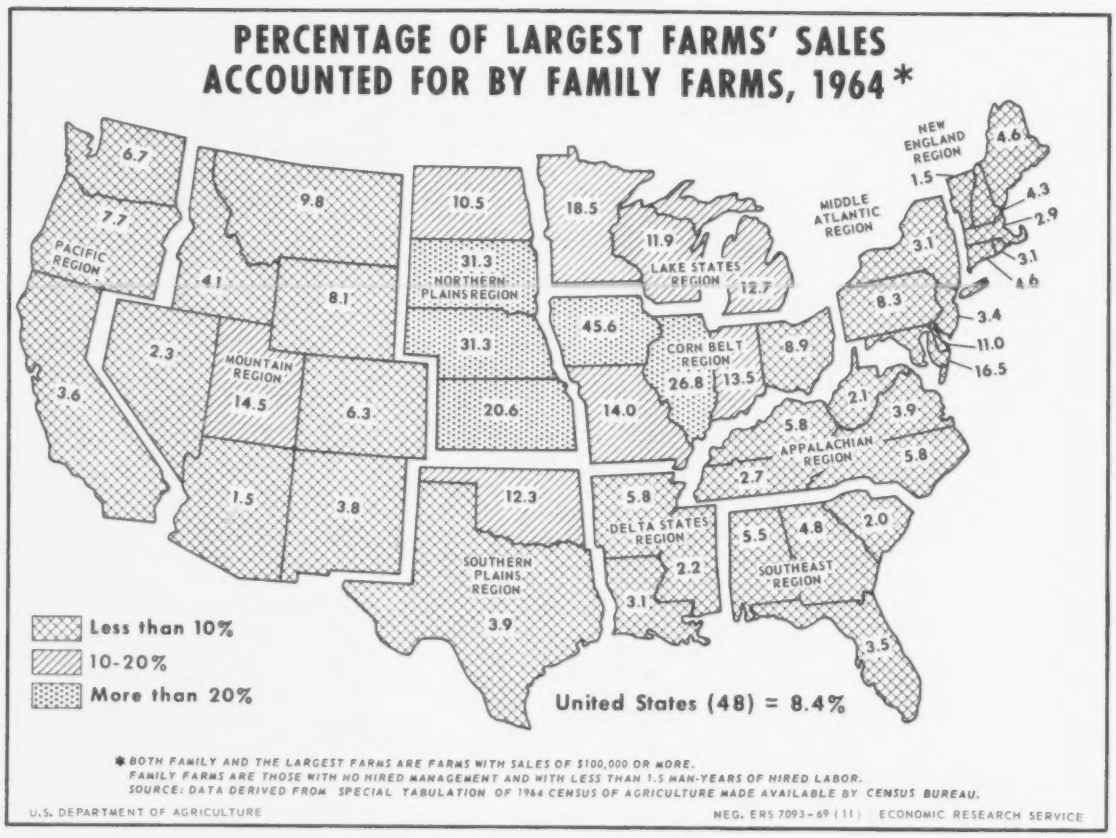

Figure 5

CONCLUSIONS

The information and analysis presented in this report do not fully answer questions raised in the introduction about the future of the largest farms.

However, the information and analysis presented do indicate that large-scale farming has still not extensively penetrated the organization of our farm production. Nonetheless, in some types of production and in some regions, this penetration has been considerable.

As for the future, empirical observation does not indicate any conclusive trend particular to the largest farms. They are increasing in size and number, as do all other adequately sized groups of farms under the impacts of new technological, economic, and social developments.

In the general race toward larger business size, the number of farms with sales of $100,000 or more probably reached 40,000 in 1969, and their gross sales accounted for at least one-third of total sales by all farms. Such expansion of large-scale farming is believed to be centering in about the same geographic areas, and in the same kinds of crop and livestock production as indicated by data in this report.

APPENDIX

Appendix table 1.--Farm and interfarm sales, and interfarm sales as a percentage of all farm sales, by size of farm, 1964 1/

Size of farm in value of sales	Number of farms	Farm sales		Interfarm sales		Interfarm sales as a percentage of all farm sales
		Total	Per farm 2/	Total	Per farm 2/	
	Thousands	Million dollars	1,000 dollars	Million dollars	1,000 dollars	Percent
The largest farms:						
$1,000,000 or more	1	2,367	2,576	854	929	36
$500,000-$999,999	1	1,067	678	280	178	26
$200,000-$499,999	8	2,253	290	521	67	23
$100,000-$199,999	21	2,852	135	646	31	23
Total	31	8,539	272	2,301	73	27
Large:						
$40,000-$99,999	111	6,474	59	1,368	12	21
$20,000-$39,999	260	7,114	27	1,259	5	18
Medium:						
$10,000-$19,999	467	6,614	14	939	2	14
$5,000-$9,999	505	3,653	7	473	1	13
Small:						
$2,500-$4,999	444	1,611	4	218	4/	14
Less than $2,500	1,338	1,143	1	287	4/	25
Abnormal 3/	2	146	67	21	10	15
All farms	3,158	35,294	11	6,866	2	19

1/ Estimated by assuming that of the total value of all feed bought by farmers, 50 percent was accounted for by interfarm sales; of the total value of all seed bought, 53 percent was accounted for by interfarm sales; and 90 percent of all livestock bought by farmers was through interfarm trade.
2/ Averages computed before figures were rounded.
3/ Abnormal farms are Indian reservations, institutional farms, and other special farms.
4/ Sales less than $500.

Source: Data derived from the 1964 Census of Agriculture, Vol. II, Ch. 6 and from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

Appendix table 2.--Estimated number and value of all cattle slaughtered and of cattle marketed from feedlots of 1,000 head or more, and estimated value of net agricultural output on feedlots with 1,000 head or more, 1962-64

Year	All cattle slaughtered		Cattle marketed from feedlots of 1,000 head or more			Net agricultural output on feedlots with 1,000 head or more 4/	
	Number 1/	Value 2/	Number 3/	Value 2/	Value as a percentage of value of all cattle slaughtered	Value	Value as a percentage of value of all cattle slaughtered
	1,000 head	Million dollars	1,000 head	Million dollars	Percent	Million dollars	Percent
1962	26,905	6,181	5,316	1,221	19.8	89.1	7.3
1963	28,604	6,040	5,840	1,257	20.8	91.8	7.3
1964	31,666	6,341	6,740	1,350	20.0	98.6	7.3

1/ As reported in 1965 supplement to Stat. Bul. 333, U.S. Dept. Agr., Aug. 1966, table 86, p. 64.
2/ Estimated on the basis of average weight and average price for slaughtered cattle, as reported in 1965 supplement to Stat. Bul. 333, U.S. Dept. Agr., Aug. 1966, table 120, p. 86 and table 15a, p. 108.
3/ Based on 28 States as reported in "Number of cattle on feedlots, 1962-1964," SRS-9, U.S. Dept. Agr., June 1966.
4/ Net agricultural output equals here the price of slaughtered cattle minus the value of purchased feeder steers and feed cost. Derived from an illustrative estimation by Econ. Res. Serv., Livestock and Meat Situation-145, U.S. Dept. Agr., Oct. 1965, p. 38.

Appendix table 3.--Number and sales of farms with sales of $100,000 or more, specified size, and by geographic region, 1964

Size of farm in value of sales	North			South			West			Percentage of farms by region		
	Farms	Total sales	Sales per farm	Farms	Total sales	Sales per farm	Farms	Total sales	Sales per farm	North	South	West
	Number	Billion dollars	1,000 dollars	Number	Billion dollars	1,000 dollars	Number	Billion dollars	1,000 dollars	-------Percent-------		
$1,000,000 or more...	166	.4	2,155.6	229	.5	2,375.4	524	1.5	2,796.3	18	25	57
$500,000-$999,999....	369	.3	668.6	478	.3	679.4	727	.5	681.2	24	30	46
$200,000-$499,999....	2,043	.5	282.9	2,485	.7	289.6	3,232	1.0	295.6	26	32	42
$100,000-$199,999....	7,106	.9	133.2	7,129	1.0	134.0	6,913	.9	137.5	33	34	33
Total.....	9,684	2.1	219.8	10,321	2.5	246.4	11,396	3.9	339.3	31	33	36

Source: Data derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

Appendix table 4.—Average value of farm products sold by farms with sales of $100,000 or more, by State, 1964

Region and State	Average value of farm products sold	Region and State	Average value of farm products sold
	1,000 dollars		1,000 dollars
New England:		Southeast:	
Maine	178	South Carolina	180
New Hampshire	197	Georgia	215
Vermont	185	Florida	406
Massachusetts	251	Alabama	199
Rhode Island	198		
Connecticut	341	Delta States:	
		Mississippi	202
Middle Atlantic:		Arkansas	189
New York	202	Louisiana	177
New Jersey	212		
Pennsylvania	214	Southern Plains:	
Delaware	225	Oklahoma	300
Maryland	197	Texas	248
Lake States:		Mountain:	
Michigan	180	Montana	212
Wisconsin	217	Idaho	281
Minnesota	201	Wyoming	195
		Colorado	382
Corn Belt:		New Mexico	284
Ohio	207	Arizona	436
Indiana	207	Utah	251
Illinois	181	Nevada	248
Iowa	181		
Missouri	197	Pacific:	
		Washington	256
Northern Plains:		Oregon	224
North Dakota	195	California	342
South Dakota	225	Alaska	1/
Nebraska	304	Hawaii	1,227
Kansas	319		
Appalachian:			
Virginia	220		
West Virginia	244		
North Carolina	195		
Kentucky	233		
Tennessee	203		

1/ Data for Alaska included in Washington to avoid disclosure of individual operations.

Appendix table 5.--Number and sales of farms with sales of $100,000 or more, by specified size and their percentage of total farms in each size group, by type of farm, 1964

Type of farm	Value of sales									
	Total, $100,000 or more		$1,000,000 and over		$500,000-$999,999		$200,000-$499,999		$100,000-$199,999	
	Farms	Sales	Farms	Sales	Farms	Sales	Farms	Sales	Farms	Sales
	Number	Million 1/ dollars	Number	Million dollars	Number	Million dollars	Number	Million dollars	Number	Million dollars
Cash-grain	2,141	351.6	5	7.4	29	19.0	345	96.5	1,762	228.7
Tobacco	102	44.2	11	23.9	7	4.8	27	7.8	57	7.7
Cotton	3,465	762.1	36	111.2	112	74.7	847	242.8	2,470	333.4
Other field crops	2,237	633.2	68	208.0	83	56.5	560	160.3	1,526	208.4
Vegetables	1,590	574.5	94	195.5	158	109.3	521	157.2	817	112.5
Fruit and nut	2,511	753.7	93	215.4	168	113.8	711	212.9	1,539	211.6
Poultry	4,744	1,108.8	89	165.8	224	153.2	1,212	354.2	3,219	435.6
Dairy	2,576	529.7	19	37.5	93	65.2	609	174.2	1,855	252.8
Livestock (other than poultry and dairy farms and livestock ranches)	6,692	2,223.5	322	948.2	368	250.9	1,436	413.2	4,566	611.2
Livestock ranches	1,815	655.3	81	277.7	117	80.0	485	145.0	1,132	152.6
General	1,884	480.1	53	105.6	90	59.7	504	145.9	1,237	168.9
Miscellaneous	1,644	422.1	48	70.8	125	79.6	503	142.8	968	128.9
Total	31,401	8,538.8	919	2,367.0	1,574	1,066.7	7,760	2,252.8	21,148	2,852.3
	Number and sales as a percentage of total farms in each size group									
Cash-grain	6.8	4.1	0.5	0.3	1.9	1.8	4.4	4.3	8.3	8.0
Tobacco	0.3	0.5	1.2	1.0	0.4	0.4	0.3	0.4	0.3	0.3
Cotton	11.1	8.9	3.9	4.7	7.1	7.0	10.9	10.8	11.7	11.7
Other field crops	7.1	7.4	7.4	8.8	5.3	5.3	7.2	7.1	7.2	7.3
Vegetables	5.1	6.7	10.2	8.3	10.1	10.2	6.7	7.0	3.9	3.9
Fruit and nut	8.0	8.8	10.2	9.1	10.7	10.7	9.2	9.5	7.3	7.4
Poultry	15.1	13.0	9.7	7.0	14.2	14.4	15.6	15.7	15.2	15.3
Dairy	8.2	6.2	2.1	1.6	5.9	6.1	7.9	7.7	8.8	8.9
Livestock (other than poultry and dairy farms and livestock ranches)	21.3	26.1	35.0	40.0	23.4	23.5	18.5	18.3	21.6	21.4
Livestock ranches	5.8	7.7	8.8	11.7	7.4	7.5	6.3	6.4	5.3	5.4
General	6.0	5.6	5.8	4.5	5.7	5.6	6.5	6.5	5.8	5.9
Miscellaneous	5.2	5.0	5.2	3.0	7.9	7.5	6.5	6.3	4.6	4.5

1/ Total includes sales of recreation facilities.

Source: Data derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

Appendix table 6.--Number of farms with sales of $100,000 or more, and their percentage of all farms, by type of farm, 1929, 1959, and 1964

Type of farm	Number of farms			As a percentage of 1959 total			As a percentage of all farms	
	1929	1959	1964	1929	1959	1964	1959	1964
	No.	No.	No.	Pct.	Pct.	Pct.	Pct.	Pct.
Cash-grain	100	1,179	2,141	8	100	182	0.3	0.4
Tobacco	54	68	102	79	100	150	1/	1/
Cotton	102	2,990	3,465	3	100	116	1.2	1.7
Other field crops	142	888	2,237	16	100	252	2.3	5.4
Vegetable	231	1,049	1,590	22	100	152	4.8	4.5
Fruit and nuts	376	1,693	2,511	22	100	148	2.8	2.9
Poultry	43	2,000	4,744	2	100	237	1.9	4.5
Dairy	200	1,755	2,576	11	100	147	.4	.6
Livestock (other than dairy and poultry)	1,081	6,156	8,507	18	100	138	.9	.9
General	12	931	1,884	1	100	202	.4	.7
All other	79	1,270	1,644	6	100	129	.2	.6
Total	2,420	19,979	31,401	12	100	157	.5	1.0

1/ Less than 0.05 percent.

Source: 1959 Census of Agriculture, Vol. 5, part 7 and Vol. II, Ch. 11, and 1964 Census of Agriculture, Vol. II, Ch. 6, table 16.

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Appendix table 7.--Farms by specified value of sales and average sales by type of farm, 1964

Type of farm	Farms with sales of $100,000 or more		Farms with sales of $1,000,000 or more	
	Total farms	Sales per farm	Total farms	Sales per farm
	Number	1,000 dollars	Number	1,000 dollars
Cash-grain	2,141	164	5	1,481
Tobacco	102	434	11	2,174
Cotton	3,465	220	36	3,089
Other field crops	2,237	283	68	3,059
Vegetable	1,590	361	94	2,079
Fruit and nut	2,511	300	93	2,316
Poultry	4,744	234	89	1,864
Dairy	2,576	206	19	1,975
Livestock (other than poultry and dairy farms and livestock ranches)	6,692	332	322	2,945
Livestock ranches	1,815	361	81	3,429
General	1,884	255	53	1,992
Miscellaneous	1,644	257	48	1,475
Total	31,401	272	919	2,576

Source: Data derived from special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

Appendix table 8.--Regional distribution of number and sales of farms with sales of $100,000 or more, by specified size and by type of farm, 1964

Type of farm	Regional distribution of farms with sales of--											
	$1,000,000 or more			$500,000-$999,999			$200,000-$499,999			$100,000-$199,999		
	North	South	West	North	South	West	North	South	West	North	South	West
	Percent											
All farms	18	25	57	23	31	46	26	32	42	33	34	33
Cash-grain	---	---	100	3	35	62	10	46	44	21	52	27
Tobacco	100	---	---	86	14	---	52	48	---	16	84	---
Cotton	---	11	89	---	45	55	1	63	36	2	74	24
Other field crops	7	13	80	31	24	45	39	17	44	45	18	37
Vegetable	2	33	65	11	29	60	13	24	63	18	23	59
Fruit and nut	1	58	41	4	44	52	9	32	59	15	26	59
Poultry	21	43	36	27	44	29	31	47	22	34	47	19
Dairy	10	37	53	5	32	63	7	24	69	14	26	60
Livestock farms 1/	31	16	53	48	16	36	63	15	22	78	9	13
Livestock ranches	6	25	69	10	40	50	9	32	59	11	31	58
General	---	4	96	7	10	83	5	20	75	12	34	54
Miscellaneous	44	27	29	41	28	31	46	26	28	46	28	26
	Percentage distribution of sales											
	Percent											
All farms	15	23	62	23	31	46	26	32	42	33	34	33
Cash-grain	---	---	100	2/	2/	62	2/	2/	45	20	52	28
Tobacco	100	---	---	2/	2/	---	2/	2/	---	18	82	---
Cotton	---	4	96	---	43	57	1	62	37	2	74	24
Other field crops	4	15	81	31	23	46	39	17	44	45	17	38
Vegetable	2/	2/	64	2/	2/	60	12	24	64	18	23	59
Fruit and nut	2/	2/	34	2/	2/	51	9	33	58	15	26	59
Poultry	16	46	38	26	45	29	31	48	21	34	47	19
Dairy	2/	2/	2/	2/	2/	2/	7	24	69	13	26	61
Livestock farms 1/	27	14	59	48	16	36	63	15	22	77	9	14
Livestock ranches	3	18	79	10	39	51	9	32	59	12	30	58
General	---	2/	2/	6	2/	2/	5	19	76	11	33	56
Miscellaneous	44	24	32	41	29	30	45	26	29	45	28	27

1/ Livestock other than poultry and dairy farms and livestock ranches.
2/ Data withheld to avoid disclosure of individual operations.

Source: Data derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

Appendix table 9.--Number and sales of farms with sales of $100,000 or more by specified size and as a percentage of total for all commercial farms, by type of farm, North, 1964

Type of farm	Commercial farms, North		The largest farms as a percentage of all commercial farms in the North				
			Total, $100,000 or more	$1,000,000 or more	$500,000-$999,999	$200,000-$499,999	$100,000-$199,999
	Number	Percent	Percent	Percent	Percent	Percent	Percent
Farms	1,137,087	100.0	0.9	1/	1/	0.2	0.7
Cash-grain	309,860	100.0	0.1	---	1/	1/	0.1
Tobacco	3,221	100.0	1.2	0.3	0.2	0.4	0.3
Cotton	3,484	100.0	1.3	---	---	0.2	1.1
Other field crops	7,996	100.0	11.8	0.1	0.3	2.8	8.6
Vegetable	9,005	100.0	2.6	1/	0.2	0.7	1.7
Fruit and nut	12,236	100.0	2.5	1/	0.1	0.5	1.9
Poultry	28,884	100.0	5.3	0.1	0.2	1.3	3.7
Dairy	286,765	100.0	0.1	1/	1/	1/	0.1
Livestock (other than poultry and dairy farms and livestock ranches)	342,499	100.0	1.4	1/	0.1	0.3	1.0
Livestock ranches	6,377	100.0	3.0	0.1	0.2	0.7	2.0
General	98,840	100.0	0.2	---	1/	1/	0.2
Miscellaneous	27,920	100.0	2.7	0.1	0.2	0.8	1.6

Type of farm	Sales		Sales as a percentage of all commercial farms in the North				
	Million dollars	Percent	Percent	Percent	Percent	Percent	Percent
Farms	17,042	100.0	12.5	2.1	1.4	3.4	5.6
Cash-grain	3,882	100.0	1.4	---	2/	2/	1.2
Tobacco	48	100.0	71.0	49.7	2/	2/	2.9
Cotton	64	100.0	10.5	---	---	2.6	7.9
Other field crops	405	100.0	44.7	1.9	4.3	15.4	23.1
Vegetable	176	100.0	30.1	2/	2/	10.7	11.6
Fruit and nut	235	100.0	24.1	2/	2/	7.9	13.5
Poultry	906	100.0	35.5	3.0	4.3	12.0	16.2
Dairy	3,631	100.0	1.4	2/	2/	0.3	0.9
Livestock farms(other than poultry and dairy farms and livestock ranches)	6,034	100.0	18.3	4.2	2.0	4.3	7.8
Livestock ranches	134	100.0	35.6	6.1	6.1	10.0	13.4
General	1,065	100.0	2.7	---	0.4	0.6	1.7
Miscellaneous	462	100.0	40.4	6.8	7.1	13.9	12.6

1/ Less than 0.05 percent.
2/ Data withheld to avoid disclosure of individual operations.

Source: Data derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

Appendix table 10.--Number and sales of farms with sales of $100,000 or more, by specified size and as a percentage of total for all commercial farms, by type of farm, South, 1964

Type of farm	Commercial farms, South		The largest farms as a percentage of all commercial farms in the South				
			Total, $100,000 or more	$1,000,000 or more	$500,000-$999,999	$200,000-$499,999	$100,000-$199,999
	Number	Percent	Percent	Percent	Percent	Percent	Percent
Farms	819,849	100.0	1.3	1/	0.1	0.3	0.9
Cash-grain	66,438	100.0	1.6	---	1/	0.2	1.4
Tobacco	168,163	100.0	1/	1/	1/	1/	1/
Cotton	154,336	100.0	1.6	1/	1/	0.4	1.2
Other field crops	18,184	100.0	2.2	0.1	0.1	0.5	1.5
Vegetable	9,137	100.0	4.3	0.3	0.5	1.4	2.1
Fruit and nut	12,595	100.0	6.0	0.4	0.6	1.8	3.2
Poultry	46,998	100.0	4.7	0.1	0.2	1.2	3.2
Dairy	57,982	100.0	1.2	1/	0.1	0.3	0.8
Livestock farms (other than poultry and dairy farms and livestock ranches)	133,445	100.0	0.5	1/	1/	0.2	0.3
Livestock ranches	34,573	100.0	1.7	0.1	0.1	0.5	1.0
General	78,779	100.0	0.7	1/	1/	0.1	0.6
Miscellaneous	39,219	100.0	1.1	1/	0.1	0.3	0.7
	Sales		Sales as a percentage of all commercial farms in the South				
	Million dollars	Percent	Percent	Percent	Percent	Percent	Percent
Farms	10,149	100.0	25.1	5.4	3.2	7.1	9.4
Cash-grain	1,007	100.0	16.9	---	2/	2/	11.8
Tobacco	1,071	100.0	0.9	---	2/	2/	0.5
Cotton	1,903	100.0	22.9	0.2	1.7	8.0	13.0
Other field crops	323	100.0	33.6	9.8	4.1	8.4	11.3
Vegetable	228	100.0	71.5	2/	2/	16.2	11.3
Fruit and nut	477	100.0	66.5	2/	2/	14.7	11.7
Poultry	1,596	100.0	32.6	4.8	4.3	10.6	12.9
Dairy	980	100.0	15.0	2/	2/	4.3	6.7
Livestock farms (other than poultry and dairy farms and livestock ranches)	1,001	100.0	29.4	13.6	3.9	6.3	5.6
Livestock ranches	470	100.0	36.9	10.6	6.7	9.7	9.9
General	835	100.0	10.9	2/	2/	3.3	6.7
Miscellaneous	258	100.0	44.1	6.6	8.8	14.7	14.0

1/ Less than 0.05 percent.
2/ Data withheld to avoid disclosure of individual operations.

Source: Data derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

Appendix table 11.--Number and sales of farms with sales of $100,000 or more, by specified size and as a percentage of total for all commercial farms, by type of farm, West, 1964

Type of farm	Commercial farms, West		The largest farms as a percentage of all commercial farms in the West				
			Total, $100,000 or more	$1,000,000 or more	$500,000-$999,999	$200,000-$499,999	$100,000-$199,999
	Number	Percent	Percent	Percent	Percent	Percent	Percent
Farms	208,776	100.0	5.5	0.3	0.3	1.6	3.3
Cash-grain	27,955	100.0	2.3	1/	0.1	0.5	1.7
Tobacco	---	---	---	---	---	---	---
Cotton	6,256	100.0	15.7	0.5	1.0	4.8	9.4
Other field crops	8,950	100.0	10.1	0.6	0.4	2.8	6.3
Vegetable	5,065	100.0	19.0	1.2	1.9	6.5	9.4
Fruit and nut	32,425	100.0	4.5	0.1	0.3	1.3	2.8
Poultry	6,238	100.0	15.6	0.5	1.1	4.2	9.8
Dairy	22,220	100.0	7.2	1/	0.3	1.9	5.0
Livestock farms (other than poultry and dairy farms and livestock ranches)	38,585	100.0	3.1	0.4	0.3	0.8	1.6
Livestock ranches	25,332	100.0	4.2	0.2	0.3	1.1	2.6
General	24,361	100.0	4.8	0.2	0.3	1.5	2.8
Miscellaneous	11,389	100.0	3.9	0.1	0.3	1.2	2.3
	Sales		Sales as a percentage of all commercial farms in the West				
	Million dollars	Percent	Percent	Percent	Percent	Percent	Percent
Farms	7,178	100.0	53.9	20.4	6.9	13.3	13.3
Cash-grain	617	100.0	20.3	1.2	1.9	7.0	10.2
Tobacco	---	---	---	---	---	---	---
Cotton	467	100.0	68.6	22.8	9.2	19.2	17.4
Other field crops	561	100.0	61.3	30.1	4.6	12.6	14.0
Vegetable	453	100.0	79.1	27.7	14.4	22.3	14.7
Fruit and nut	904	100.0	42.1	8.2	6.4	13.8	13.7
Poultry	417	100.0	64.2	15.1	10.7	18.2	20.2
Dairy	744	100.0	44.4	2/	2/	16.1	20.7
Livestock farms (other than poultry and dairy farms and livestock ranches)	1,260	100.0	65.5	44.4	7.2	7.3	6.6
Livestock ranches	806	100.0	53.8	27.2	5.0	10.7	10.9
General	721	100.0	49.9	2/	2/	15.4	13.2
Miscellaneous	228	100.0	53.4	9.8	10.6	17.9	15.1

1/ Less than 0.05 percent.
2/ Data withheld to avoid disclosure of individual operations.

Source: Data derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

Appendix table 12.--Average sales of farms with sales of $100,000 or more, by type of farm and by geographic region, 1964

Type of farm	Average sales in North		Average sales in South		Average sales in West	
	Farms with sales of $100,000 or more	Farms with sales of $1,000,000 or more	Farms with sales of $100,000 or more	Farms with sales of $1,000,000 or more	Farms with sales of $100,000 or more	Farms with sales of $1,000,000 or more
	1,000 dollars					
All farms	220	2,156	246	2,375	339	2,795
Cash-grain	137	---	157	---	194	1,481
Tobacco	853	2,174	163	---	---	---
Cotton	150	---	179	1,232	325	3,321
Other field crops	193	1,585	274	3,507	382	3,121
Vegetable	223	1/	418	1/	372	2,056
Fruit and nut	184	1/	421	1/	262	1,941
Poultry	208	1,422	233	2,003	275	1,960
Dairy	169	1/	219	1/	207	1/
Livestock ranches	247	1,627	304	2,498	413	3,922
Other livestock	233	2,523	398	2,677	683	3,271
General	169	---	170	1/	306	1/
Miscellaneous	251	1,497	252	1,304	272	1,600

1/ Data withheld to avoid disclosure of individual operations.

Source: Data derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

Appendix table 13.--Sales or production of farms with sales of $100,000 or more, reporting specified products sold, as a percentage of total for all farms, 1959 and 1964

Specified product	Unit of production or sales	Production or sales as a percentage of total for all farms	
		1959	1964
		Percent	
Livestock and poultry sold alive, and their products sold:			
Cattle and calves	Dollar sales	22.7	32.8
Hogs and pigs	do.	1.9	4.7
Sheep and lambs	do.	15.7	29.5
Chickens including broilers	do.	14.8	23.3
Whole milk	do.	7.4	10.7
Eggs	do.	10.1	36.8
Specified crops:			
Corn for grain	Bushels harvested	1.8	3.8
Wheat	do.	NA	5.6
Oats	do.	NA	2.7
Barley	do.	NA	20.0
Sorghum for grain or seed	do.	NA	14.4
Rice	do.	NA	40.8
Soybeans	do.	NA	7.0
Potatoes	do.	25.5	53.0
Cotton	Bales harvested	NA	29.9
Tobacco	Pounds harvested	NA	2.0
Vegetables	Dollar sales	49.3	60.9
Fruits and nuts	do.	31.0	46.0

NA = Not available.

Source: 1959 Census of Agriculture, Vol. I, Ch. 11 and Vol. 5, part 7, and 1964 Census of Agriculture, Vol. II, Ch. 6.

Appendix table 14.--Number and percentage distribution of farms with sales of $100,000 or more, by specified size in value of sales and by acreage, 1964

Size of farm in value of sales	Farms reporting acreage of--								
	Less than 10	10-69	70-139	140-259	260-499	500-999	1,000-1,999	2,000 or more	Total farms
	Number								
$1,000,000 or more	1	75	74	60	56	70	141	442	919
$500,000-$999,999	17	144	72	97	118	282	266	578	1,574
$200,000-$499,999	146	773	345	546	950	1,441	1,428	2,131	7,760
$100,000-$199,999	674	1,895	1,066	1,978	3,527	4,343	3,927	3,738	21,148
Total	838	2,887	1,557	2,631	4,651	6,136	5,762	6,889	31,401
	Percentage distribution								
	Percent								
$1,000,000 or more	0.1	8.2	8.1	6.5	6.1	7.6	15.3	48.1	100.0
$500,000-$999,999	1.1	9.1	4.6	6.2	7.5	17.9	16.9	36.7	100.0
$200,000-$499,999	1.9	10.0	4.4	7.0	12.2	18.6	18.4	27.5	100.0
$100,000-$199,999	3.2	9.0	5.0	9.3	16.7	20.5	18.6	17.7	100.0
Total	2.7	9.2	5.0	8.5	14.8	19.5	18.4	21.9	100.0

Source: Data derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

Appendix table 15.--Tenure under which farmland was operated, all farms, specified years, 1944-64

Year	Total farmland 1/	Percentage of farmland operated under--2/		
		Ownership	Rental	Paid management
	Million acres	Percent		
1944 3/	1,142	53	38	9
1949	1,161	56	35	9
1954 3/	1,160	56	35	9
1959	1,123	55	35	10
1964	1,110	54	4/ 36	10

1/ Except for 1944, totals for the 3 kinds of tenures were estimated by assuming that part owners(included in both ownership and rental) did not subrent their rented land.

2/ Computed before rounding numbers.

3/ Alaska and Hawaii not included.

4/ Estimated by subtracting acreages operated by owners and managers from total acreage.

Source: 1964 Census of Agriculture, Vol. II, Ch. 8, table 2, p. 754.

Appendix table 16.--Nonfarmwork of farm operators on farms with sales of $100,000 or more, by State, 1964

Region and State	Operators	Nonfarmwork of farm operator			
		Operators reporting 1/	Days worked on nonfarm jobs	Average days worked by--	
				Operators reporting 1/	All operators
	Number	Percent	Days	Days	Days
United States	31,401	16	720,135	142	23
New England:					
Maine	439	22	11,346	116	26
New Hampshire	42	14	880	147	21
Vermont	37	33	1,183	99	32
Massachusetts	156	12	3,106	163	20
Rhode Island	25	12	280	93	11
Connecticut	163	8	2,202	169	14
Middle Atlantic:					
New York	647	12	8,008	107	12
New Jersey	277	6	2,866	159	10
Pennsylvania	486	17	11,805	146	24
Delaware	162	19	5,640	188	35
Maryland	261	26	9,492	138	36
Lake States:					
Michigan	333	18	8,339	139	25
Wisconsin	358	16	9,854	167	28
Minnesota	537	21	15,714	137	29
Corn Belt:					
Ohio	475	15	11,263	154	24
Indiana	458	23	13,451	129	29
Illinois	1,053	17	14,895	81	14
Iowa	1,445	19	28,033	100	19
Missouri	482	23	17,054	156	35
Northern Plains:					
North Dakota	209	19	5,310	136	25
South Dakota	280	17	4,545	97	16
Nebraska	1,034	16	18,187	109	18
Kansas	748	16	15,436	128	21
Appalachian:					
Virginia	321	23	11,509	156	36
West Virginia	63	27	2,987	176	47
North Carolina	447	24	17,497	165	39
Kentucky	164	27	5,793	129	35
Tennessee	188	21	5,912	148	31
Southeast:					
South Carolina	338	20	9,420	143	28
Georgia	725	27	31,836	163	44
Florida	1,611	18	54,951	186	34
Alabama	412	26	19,342	179	47

See footnote at end of table.

Appendix table 16.--Nonfarmwork of farm operators on farms with sales of $100,000 or more, by State, 1964--Continued

Region and State	Operators	Nonfarmwork of farm operator			
		Operators reporting 1/	Days worked on nonfarm jobs	Average days worked by--	
				Operators reporting 1/	All operators
	Number	Percent	Days	Days	Days
Delta States:					
Mississippi	1,213	15	27,629	153	23
Arkansas	1,203	12	22,080	148	18
Louisiana	438	18	12,600	164	29
Southern Plains:					
Oklahoma	276	19	8,440	162	31
Texas	2,499	19	78,646	163	31
Mountain:					
Montana	251	16	6,340	163	25
Idaho	505	17	9,699	113	19
Wyoming	170	15	2,479	95	15
Colorado	675	17	12,386	111	18
New Mexico	318	15	6,314	134	20
Arizona	841	10	13,044	155	16
Utah	143	25	5,789	161	40
Nevada	89	11	1,530	153	17
Pacific:					
Washington	721	13	12,904	139	18
Oregon	512	12	7,761	127	15
California	7,043	11	110,562	141	16
Alaska	NA	NA	NA	NA	NA
Hawaii	127	14	3,766	209	30

1/ Includes some operators who worked on other farms. Less than 4 percent of the days worked off-farm was on other farms.

NA = Not applicable.

Source: 1964 Census of Agriculture, Vol. I, table 23.

Appendix table 17.--Average off-farmwork and off-farm income per farm, by operators and by other persons in operator households, by State, all farms, 1964

Region and State	Average days worked per farm at off-farm jobs by--1/		Average off-farm income per farm from all sources of--2/	
	Operators	Other members of operator households	Operators	Other members of operator households
	Days	Days	Dollars	Dollars
United States	79	46	2,360	824
New England:				
Maine	100	72	2,211	1,147
New Hampshire	112	73	2,864	1,216
Vermont	75	77	1,860	1,172
Massachusetts	84	67	2,684	1,396
Rhode Island	85	39	2,229	1,023
Connecticut	84	68	3,016	1,486
Middle Atlantic:				
New York	81	58	2,269	1,185
New Jersey	64	51	2,508	1,207
Pennsylvania	94	57	2,480	1,026
Delaware	78	46	2,211	835
Maryland	85	62	2,764	1,251
Lake States:				
Michigan	109	55	3,139	1,090
Wisconsin	69	51	1,832	886
Minnesota	48	37	1,680	649
Corn Belt:				
Ohio	100	48	2,870	973
Indiana	99	54	2,933	1,005
Illinois	60	39	2,147	808
Iowa	43	31	2,013	590
Missouri	80	40	2,270	699
Northern Plains:				
North Dakota	30	27	1,573	517
South Dakota	29	26	1,378	496
Nebraska	36	29	2,017	554
Kansas	65	38	2,392	704

See footnotes at end of table.

Appendix table 17.--Average off-farmwork and off-farm income per farm, by operators and by other persons in operator households, by State, all farms, 1964--Continued

Region and State	Average days worked per farm at off-farm jobs by--1/		Average off-farm income per farm from all sources of--2/	
	Operators	Other members of operator households	Operators	Other members of operator households
	Days	Days	Dollars	Dollars
Appalachian:				
Virginia	85	58	2,183	988
West Virginia	109	38	2,679	691
North Carolina	69	61	1,678	855
Kentucky	71	39	1,812	660
Tennessee	85	54	2,030	820
Southeast:				
South Carolina	87	73	1,886	1,007
Georgia	91	64	2,233	972
Florida	105	49	3,239	925
Alabama	93	51	2,135	796
Delta States:				
Mississippi	81	50	1,759	698
Arkansas	86	44	1,832	606
Louisiana	95	35	2,575	669
Southern Plains:				
Oklahoma	102	41	2,827	697
Texas	93	42	3,052	800
Mountain:				
Montana	54	33	2,072	685
Idaho	83	48	2,294	814
Wyoming	58	37	2,203	798
Colorado	69	39	2,715	774
New Mexico	84	34	3,174	690
Arizona	92	41	3,976	909
Utah	118	56	3,392	977
Nevada	79	46	2,764	1,032
Pacific:				
Washington	107	48	3,450	960
Oregon	114	52	3,655	1,011
California	91	46	4,279	1,191
Alaska	107	34	5,319	979
Hawaii	129	97	3,309	1,735

1/ In the United States, nonfarm jobs accounted for 96 percent of all off-farmwork by operators and 92 percent of that done by other household members.

2/ Operators' off-farm income consisted of: 60 percent, wages and salaries; 21 percent, nonfarm businesses or professions and social security and other benefits; 19 percent, Government payments, rent, interest, dividends, and so forth.

Source: 1964 Census of Agriculture, Vol. II, Ch. 5, tables 22 and 23.

Appendix table 18.--Off-farm income of all persons in farm operator households, by size of farm, all farms, 1964

Off-farm income	Size of farm 1/				
	Total 2/	Largest	Large	Medium	Small
	Dollars				
Wages and salaries	6,447,322,367	37,876,948	390,249,695	1,371,145,750	4,648,049,974
Nonfarm business or profession	1,154,776,676	19,373,461	132,838,482	284,366,754	718,197,979
Social security, pensions, veteran and welfare payments	841,370,922	3,553,721	39,125,993	147,293,553	651,397,655
Rent from farm and nonfarm property, interest, dividends, Government payments and so forth	1,604,223,997	85,228,547	424,091,365	590,115,999	504,788,086
Total	10,047,693,962	146,032,677	986,305,535	2,392,922,056	6,522,433,694
	Percentage distribution				
Wages and salaries	64.1	25.9	39.5	57.3	71.3
Nonfarm business or profession	11.5	13.3	13.5	11.9	11.0
Social security, pensions, veteran and welfare payments	8.4	2.4	4.0	6.1	10.0
Rent from farm and nonfarm property, interest, dividends, Government payments, and so forth	16.0	58.4	43.0	24.7	7.7
Total	100.0	100.0	100.0	100.0	100.0

1/ Farm sizes are measured as follows: The largest--$100,000 or more; large--$20,000 through $99,999; medium--$5,000 through $19,999; and small--less than $5,000.

2/ Indian reservations, institutional farms, and other special farms are not included.

Source: 1964 Census of Agriculture, Vol. 2, Ch. 6, tables 15 and 16.

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Appendix table 19.--Off-farm income of all persons in farm operator households on farms with sales of $100,000 or more, by State, 1964

Region and State	Operator households	Off-farm income of operator households			
		Households reported	Total off-farm income	Average per household for--	
				Households reported	All households
	Number	Percent	1,000 dollars	Dollars	Dollars
United States	31,401	57	146,033	8,106	4,651
New England:					
Maine	439	56	787	3,201	1,794
New Hampshire	42	48	111	5,537	2,637
Vermont	37	70	240	9,210	6,472
Massachusetts	156	56	593	6,810	3,798
Rhode Island	25	64	55	3,464	2,217
Connecticut	163	58	477	5,077	2,928
Middle Atlantic:					
New York	647	56	1,549	4,254	2,393
New Jersey	277	53	841	5,758	3,035
Pennsylvania	486	54	1,485	5,626	3,056
Delaware	162	55	491	5,514	3,029
Maryland	261	58	813	5,351	3,116
Lake States:					
Michigan	333	59	1,117	5,726	3,353
Wisconsin	358	59	1,053	5,014	2,941
Minnesota	537	64	1,746	5,121	3,252
Corn Belt:					
Ohio	475	59	1,463	5,261	3,079
Indiana	458	63	1,730	6,028	3,778
Illinois	1,053	55	3,432	5,877	3,259
Iowa	1,445	65	5,425	5,734	3,754
Missouri	482	68	2,956	8,956	6,132
Northern Plains:					
North Dakota	209	74	1,106	7,132	5,289
South Dakota	280	68	1,202	6,360	4,293
Nebraska	1,034	69	5,230	7,335	5,058
Kansas	748	70	4,359	8,351	5,828
Appalachian:					
Virginia	321	64	1,475	7,126	4,595
West Virginia	63	67	203	4,829	3,219
North Carolina	447	68	1,961	6,410	4,388
Kentucky	164	68	1,037	9,256	6,321
Tennessee	188	66	1,066	8,597	5,670
Southeast:					
South Carolina	338	64	1,307	5,995	3,867
Georgia	725	65	2,879	6,138	3,971
Florida	1,611	50	6,941	8,612	4,309
Alabama	412	67	1,854	6,716	4,499
Delta States:					
Mississippi	1,213	58	5,176	7,405	4,267
Arkansas	1,203	47	4,099	7,230	3,408
Louisiana	438	54	2,843	12,044	6,490
Southern Plains:					
Oklahoma	276	70	4,572	23,813	16,566
Texas	2,499	61	21,340	13,930	8,540
Mountain:					
Montana	251	61	1,039	6,837	4,141
Idaho	505	57	1,892	6,569	3,746
Wyoming	170	59	828	8,276	4,868
Colorado	675	58	3,242	8,291	4,803
New Mexico	318	54	1,790	10,346	5,629
Arizona	841	45	4,099	10,788	4,874
Utah	143	62	679	7,630	4,749
Nevada	89	52	259	5,622	2,906
Pacific:					
Washington	721	58	3,289	7,926	4,562
Oregon	512	53	1,515	5,611	2,959
California	7,043	51	31,879	8,858	4,526
Alaska 1/	---	---	---	---	---
Hawaii	127	56	508	7,153	3,999

1/ Data for Alaska withheld to avoid disclosure.

Source: 1964 Census of Agriculture, Vol. I, table 23.

Appendix table 20.--Average age and years of schooling of commercial farm operators, by State, 1964

State	Average age of farm operator	Average years of schooling	State	Average age of farm operator	Average years of schooling
	Years	Years		Years	Years
Conterminous U.S.	49.4	9.5			
Alabama	50.3	8.2	Nebraska	47.9	10.2
Arizona	49.4	12.4	Nevada	48.9	11.0
Arkansas	49.7	8.8	New Hampshire	51.3	10.8
California	50.9	10.9	New Jersey	51.2	10.0
Colorado	48.7	10.4	New Mexico	49.8	10.1
Connecticut	51.3	10.4	New York	49.8	10.2
Delaware	50.0	9.4	North Carolina	48.5	7.9
Florida	52.0	10.2	North Dakota	47.4	9.3
Georgia	50.4	8.3	Ohio	49.4	10.4
Idaho	49.0	11.8	Oklahoma	50.7	9.9
Illinois	48.8	10.1	Oregon	50.9	10.8
Indiana	49.3	10.5	Pennsylvania	48.9	9.7
Iowa	47.5	10.2	Rhode Island	51.1	10.2
Kansas	49.7	10.5	South Carolina	49.6	8.0
Kentucky	49.3	8.3	South Dakota	47.5	9.7
Louisiana	49.8	7.9	Tennessee	50.5	8.2
Maine	50.5	10.6	Texas	51.2	9.7
Maryland	50.1	9.1	Utah	50.3	11.3
Massachusetts	51.8	10.9	Vermont	49.5	10.0
Michigan	49.4	9.9	Virginia	51.0	8.2
Minnesota	47.8	9.3	Washington	50.1	10.7
Mississippi	50.3	8.3	West Virginia	52.4	8.8
Missouri	50.5	9.6	Wisconsin	48.4	9.3
Montana	48.7	11.2	Wyoming	49.4	10.6

Source: Data derived from 1964 Census of Agriculture, Vol. I, State table 17.

Appendix table 21.--Sales by family farms as a percentage of all farm sales, by States, 1964 1/

Region and State	Percent	Region and State	Percent
New England:		Southeast:	
Maine	47	South Carolina	47
New Hampshire	62	Georgia	57
Vermont	75	Florida	20
Massachusetts	44	Alabama	64
Rhode Island	50		
Connecticut	41	Delta States:	
		Mississippi	45
Middle Atlantic:		Arkansas	50
New York	63	Louisiana	52
New Jersey	43		
Pennsylvania	72	Southern Plains:	
Delaware	57	Oklahoma	79
Maryland	65	Texas	48
Lake States:		Mountain:	
Michigan	79	Montana	72
Wisconsin	87	Idaho	58
Minnesota	89	Wyoming	57
		Colorado	43
Corn Belt:		New Mexico	38
Ohio	81	Arizona	11
Indiana	85	Utah	63
Illinois	87	Nevada	29
Iowa	91		
Missouri	82	Pacific:	
		Washington	54
Northern Plains:		Oregon	54
North Dakota	87	California	21
South Dakota	88		
Nebraska	79	Total (48 States)	64
Kansas	78		
Appalachian:			
Virginia	62		
West Virginia	67		
North Carolina	72		
Kentucky	80		
Tennessee	75		

1/ Family farms are those with no hired management and with less than 1.5 man-years of hired labor.

Source: Data derived from a special tabulation of the 1964 Census of Agriculture made available by Bur. of Census.

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